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ABSTRACT

Traditionally, tests administered in the Fremont, California Unified School District were selected by administrators at the district office level. For this practicum, a district selection committee, composed of certificated staff on all levels, reviewed and selected tests to be administered within the district. Testing workshops were conducted for teachers, counselors, and administrators on test interpretation, administration, and analysis. The relevancy of test data for teachers, counselors, and principals was also discussed. A testing handbook, which includes reference material designed for use in federally funded programs, and student diagnostic profiles, which aid in management of records, were developed. They are included in the appendices. (Author/MV)

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Staff Development Through Inservice Workshops in Testing for Teachers, Counselors and Principals

JAN 1 0 1977

by Kurtis J. Lile[1]

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TM006 481

Introductory Practicum
San Francisco Bay Area Cluster
Submitted: November 22, 1976

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INTRODUCTION

This study is a guide for those in management positions responsible for the school district testing program.

Traditionally, tests administered across the district were selected by district office level administrators of the Fremont Unified School District. In this report, the reader will find that a district test selection committee, composed of certificated staff on all levels, reviewed and selected district tests to be administered. Testing workshops were provided for teachers, counselors, and administrators on test administration, interpretation and analysis.

Products of this study were a testing handbook and student diagnostic profiles. The report is divided into six major categories:

1) Identifying the problem: This section summarizes the need, as expressed by teachers, counselors, and principals, for inservice workshops in the area of test administration, interpretation, and analysis.

2) Solution to the problem: This section provides the basic steps taken to develop, implement, and install the annual workshops into the district's educational program.

3) Objectives of the study: This section states the objectives of the study as they were formulated to meet the needs of the employees of the district.

4) Design of the study: This section is the major body of the report. It reports in detail the strategies used in the design, implementation, and installation of the study into the educational program of the Fremont Unified School

District. It includes a description of the needs assessment process and outcomes, and the development of a testing handbook and student diagnostic profiles.

5) Method of Evaluation: The evaluation design which was tied directly to the objectives of the practicum. A detailed explanation of how each objective was met is presented in this section.

6) Appendices: This section contains all the important back-up information which will substantiate objectives accomplished in the report.

Acknowledgements are in order here to those individuals who have contributed to this practicum--Paul Kullman for providing testing inservice workshops; Dorothy Kakimoto for providing a basic outline of a testing handbook for adaptation; Martin Jacobs for designing the mathematics diagnostic profiles; Beverly Berube for designing the reading diagnostic profiles; Phyllis Zwissig and William Wright for assisting in the implementation of design of the mathematics and reading profiles; Lois Carr for the arrangement of testing workshops; Phil Brazil, John Mazzone and Wess Peterson for monitoring and observing this practicum; Gail Pagan for consulting and editing the study; and Mary Ann Franks for the final typing of this manuscript.

INTRODUCTION

This practicum is a guide for those in management positions responsible for the school district testing program.

Traditionally, tests administered across the district were selected by district office level administrators of the Fremont Unified School District. In this report, the reader will find that a district test selection committee, composed of certificated staff on all levels, reviewed and selected district tests to be administered. Testing workshops were provided for teachers, counselors, and administrators on test administration, interpretation and analysis.

Products of this practicum were a testing handbook and student diagnostic profiles. The report is divided into six major categories:

1) Identifying the problem: This section summarizes the need, as expressed by teachers, counselors, and principals, for inservice workshops in the area of test administration, interpretation, and analysis.

2) Solution to the problem: This section provides the basic steps taken to develop, implement, and install the annual workshops into the district's educational program.

3) Objectives of the practicum: This section states the objectives of the practicum as they were formulated to meet the needs of the employees of the district.

4) Design of the practicum: This section is the major body of the report. It reports in detail the strategies used in the design, implementation, and installation of the practicum into the educational program of the Fremont Unified School

IDENTIFYING THE PROBLEM

Historically, federal guidelines and now the 1974 Education Amendment, HR 69, referred to as PL 93-380, require that federal programs be evaluated on the basis of test scores that show the academic achievement of identified program participants in reading, language, and mathematics in terms of months gained from year to year, utilizing the traditional pre-test/post-test research design. An additional requirement is to report the progress toward the implementation of individualized instruction.

For the past two years, Fremont Unified School District's testing committee has thoroughly investigated commercially available test instruments, materials, scoring services, and testing schedules of other districts. During the 1975-76 school year, the committee adopted a district-wide testing program (K-12) designed to meet both the local needs and the federal requirements of PL 93-380. Although tests were administered, as required, test results were not being used by teachers to individualize instruction because teachers lacked training in interpretation of pupils' test scores.

A second area of concern was test administration procedures. Poor test procedures were indicated to the writer by the frequency of teacher questions. Students' answer sheets were received in the testing office with sample questions administered improperly or not at all. There were no names on some student answer sheets. School leader sheets were not completed. All of these inconsistancies contributed to poor or invalid test results.

Traditionally, a district of this size (31,000 ADA) employs a full-

time director of testing with a staff of from one to four school psychologists to provide inservice training to teachers, counselors, and principals in test interpretation. In Fremont Unified School District, the testing program continues to be the responsibility of the Federal and State Projects Director whose total staff consists of a part-time clerk typist to administer the testing program. Fremont Unified School District is a low-wealth school district. The budget does not provide for inservice testing workshops. Test publisher's consultants were requested to provide this service which limited the frequency of inservice and did not meet this vital need in an on-going basis.

Teachers in California must have, as a certification requirement, a course in tests and measurements, however; in many cases that course was taken ten to twenty years ago. Further, the course was taken by teaching candidates before actual experience was provided with students or actual test scores. Said another way, the course was not relevant to the needs at the time it was required; it meant little to most teachers other than a hurdle to jump in order to graduate. Sound educational practice today, with the push for individualized instruction and mastery learning required not only by federal programs but expected by most California Boards of Education in all curricular areas, leaves teachers in need of inservice workshops and reference materials in the following areas: test administration, test interpretation, and test utilization to enable them to diagnose and prescribe the needs of their students. Unfortunately, this requirement is not met with a standard reference book found in a library. Teachers' reference material and test

interpretation information must be current and sensitive to enable them to interpret the test results of their students.

PROBLEM SOLUTION

Since the school district is low-wealth, no funds were available to provide inservice training for staff in the area of test selection, test administration, interpretation, and analysis. So, the district had the following options:

1. Continue to select tests for the district schools through district administration.
2. Adopt tests by review of test schedules of neighboring districts.
3. Formulate a district testing committee to select tests and maintain an on-going needs assessment by selecting test committee members from the district's existing attendance area structure.

Options one and two were rejected for the following reasons:

1. Option 1 would perpetuate the problem in the district of arbitrary test selection.
2. Option 2 was rejected on the basis that districts have different needs and simply by adopting tests used in neighboring district would not solve Fremont's problems.

Option three was accepted because it would provide a standing committee to oversee the district's test selection process and install an on-going needs assessment of the other needs in the area of testing.

GOALS OF THE PRACTICUM

In order that teachers, counselors, and principals developed skills

to be knowledgeable about testing procedures and data interpretation the following goals were set forth for this practicum:

1. To develop the skills necessary to read and understand the scoring reports provided.
2. To develop the skills necessary to interpret both individual and group test data.
3. To develop the skills necessary to utilize the test data provided on students.
4. To develop the skills necessary to properly administer tests.

OBJECTIVES OF THE PRACTICUM

1. By October 1974, a district testing committee will be formed for the purpose of test selection and reporting to attendance areas maintaining open communications between school level and district level staff and developing an ongoing needs assessment process in the area of testing.
2. Upon completion of the school year (1974-75) Fremont Unified School District principals, counselors and teachers will be provided test interpretation/analysis workshops for specific workshop objectives.
3. By September 20, 1975, a testing handbook will be developed for federal project schools. A special orientation on the use of the handbook will be given to federal project participants. The handbook will include detailed guidelines in three areas of concern: test administration,

test interpretation and test information application and a model for recording individual student test data and auxiliary services.

4. By June 19, 1976, Title I mathematics and reading specialists will have models of student diagnostic profiles developed, printed, and installed in the program.

DEVELOPMENT OF THE PRACTICUM DESIGN

Based on the concerns stated above, the following steps were taken to solve the problem:

1. Formation of a district test committee representative of Kindergarten through twelfth grade. The purpose of this committee is to maintain an ongoing needs assessment in the areas of testing through input from the five district attendance areas.

A district testing committee was formed in our district under the chairmanship of the writer, Director of Federal and State Projects, with the express purpose of reviewing tests and recommending to the district board of education the adoption of tests to be administered for federal and state projects and across the district. (See Appendix A.) Before this practicum was initiated, tests were selected by district office personnel. The committee now meets monthly and is composed of: the Director of Federal and State Projects; Associate Superintendent; two

assistant principals, high school level; one principal, junior high level; six elementary principals; one teacher, elementary level; a teachers' association representative; one principal, high school level; one representative of the administrators' association; one reading specialist, district office; and one high school counselor.

The major charge of this test committee, given by the Associate Superintendent, in charge of instruction, as stated above was to select tests to be administered across the district. In order that the test selection process be orderly and comprehensive in scope a sub-committee was formed for the express purpose of reviewing tests for grade levels K-12 and recommending adoption of tests for each level to the district-wide test selection committee. (See Appendix B.) The sub-committee reviewed nine separate tests and recommended piloting of two: the Stanford test in one attendance area, and the SRA in another. Results were compared and the Stanford test was selected to be used in all grades 1-12. An additional recommendation was made to adopt the Santa Clara Inventory for Kindergarten. These recommendations were based on available test analyses from the commercial tests resulting from pilot testing.

Data on the two tests was presented to the district's five attendance areas. The consensus of the sub-committee's vote was to adopt the Stanford test for all grade levels to be tested.

The sub-committee reported to the full committee that the Stanford results were more complete for district use and individual student profiles were a part of the information available from this company which could be used for planning programs for individual students. The sub-committee's recommendations to pilot test SRA and Stanford, minutes of the district-wide test committee, comparison data on results of the two tests piloted and the district testing schedules for 1973-74 and 1974-75 may be found in Appendix C.

Once the tests for the district were selected, other recommendations brought to the district-wide testing committee were considered. Needs were expressed that test administration, interpretation, and analysis workshops were needed for teachers, counselors, and principals to enable them to use test results to better advantage. Federal project schools indicated that test information and reference materials were needed for reference in the form of a packet or handbook at the school level.

The attendance area chairpersons and principal representatives on the district test committee held attendance area meetings in their respective areas. The district testing committee's recommendations were presented at attendance area meetings, a vote was taken and results were reported to the test committee. In turn, concerns, needs, and recommendations were brought to the test committee. This construct built strong lines of communication among the attendance areas and the district level testing committee enabling the committee to maintain an ongoing needs assessment process throughout the school year which was sensitive to the needs of teachers, students, and administrators at all levels. Through this comprehensive, sensitive structure we have an ongoing monitoring system of testing needs in our schools, feedback to answer many questions, clear up misconceptions, and give direction to set priorities that meet the needs of the greatest number of employees.

Needs expressed by attendance area chairpersons and principals were two-fold: (a) test interpretation/data analysis workshops; and (b) reference materials to keep teachers and counselors informed as to the most current information on tests administered for their use in planning for individualized needs of students.

It was from this communications network that the testing committee voted to have workshops on test interpretation/data analysis and to deal in some manner with providing teachers with needed materials for making curriculum decisions. After the testing office clerk reported the terrible condition in which answer sheets were received and that 392 hours had been needed to ready the answer sheets for processing it was evident to the committee that information on how to administer tests was also sorely needed.

2. The need for inservice workshops for principals, counselors, and teachers.

Three inservice workshops were provided on test interpretation and analysis using test results of participants, schools, grades, and students for: (a) high school principals and counselors; (b) junior high principals and counselors; (c) elementary principals and teachers. Attendance at the workshops was excellent--forty principals, twenty counselors, and thirty-five elementary teachers.

All workshop participants were asked to bring test results sent to their schools on their students for reference at the workshop. Paul Kullman, test consultant from Harcourt, Brace and Jovanovich, provided the workshops free of charge. He started

the workshops with an overview of all test results; later he grouped the participants into several small groups with specific assignments to ascertain if participants understood results of their students as reported. He worked with one group at a time to assist in understanding results. The workshops were concluded with a question and answer period. A pre-post self-appraisal inventory was used to evaluate growth of participants. (See Appendix D.) Results were reported under the evaluation section of this report below.

3. The need for test reference material in the form of a testing manual or handbook was met.

A testing handbook was developed by the writer from input by the district testing committee which reported handbook needs from the five district attendance area representatives and those needs reported by the federal project schools. The handbook assists teachers, counselors, and administrators in the area of test interpretation, administration, and application.

The handbook (see Appendix I) is a compilation of data helpful to all teachers and most especially those teachers in federally funded programs, where pre-post testing is mandatory for the perpetuation of the different programs. The handbook specifically

includes information on test administration, test interpretation and a glossary of terms needed for understanding testing and the interpretation process.

4. A fourth area of concern was voiced by elementary teachers specifically in federal and state project schools. Their concern was a need for diagnostic profiles (i.e., a management system) for recording needs and accomplishments of students.

Diagnostic profiles were developed for this purpose. They have been tested and are now in use in Fremont's Title I and Early Childhood Education schools. The profiles were developed by Title I mathematics and reading specialists with input from management and school staff. Other federal and state projects, as well as non-public schools, may use these profiles as they have been designed or as a model to be used for development of a more suitable one to fit special program needs. The ESEA Title I staff at Durham and Grimmer Elementary Schools have developed diagnostic profiles in mathematics and reading for individual students. Management class rosters for teachers were also developed with a series of criterion reference tests (18-30 per level) to facilitate management by objective for our Title I program. This complete management system was developed

and perfected to facilitate better use of test data and has greatly complimented the intent of this study.

The entire management system is too detailed and bulky to include in the body of this report, however, parts (examples) have been appended for the reader to visualize the product (Appendices E and F).

The actual profiles K-6, one per grade level for mathematics and reading, are legal-size manila folders with legal-size inserts. These have been reduced in size to include in this report (see Appendices E and F).

Samples of criterion reference mathematics tests have also been included (one per grade level). Eighteen to 30, depending on grade level, have been developed and are being used in our Title I schools. (If the reader wishes to review and/or acquire the entire management system [mathematics, reading and criterion reference tests] he may do so by writing to the author of this practicum.*) This management system is being used by several non-project schools in our district. We have honored requests from many other school districts in the State which have been given our name by the California State Department of Education. Copies of the Title I mathematics profile may be found in Appendix E and sample copies of criterion reference tests for each grade level K-6. Class profiles are also kept by the teachers in our Title I schools, which are composites of a total class (see Appendix F).

*Requests for material will be honored on the basis of availability, printing, and mailing charges.

INSTALLATION OF THIS PRACTICUM IN FREMONT UNIFIED SCHOOL DISTRICT

1. The concept of a district testing committee has been recognized as a necessary district committee and is a permanent change in the district structure.
2. Testing workshops are held on an annual basis for purposes of training and retraining teachers, counselors, and administrators in the area of test administration, interpretation, and analysis. Fremont has been able to provide testing workshops, cost free to the district, by negotiating with commercial test companies from whom the district purchases its tests.
3. The testing handbook has been adopted by the federal project schools as the official testing handbook. It has been distributed and is in use at our Title I schools.
4. Diagnostic profiles have been installed in our Title I and Early Childhood Education schools. Many non-project schools are also using them or have adapted them for their use.

REQUIRED INPUTS

The required human efforts and materials needed for this practicum are set forth below:

1. This practicum was performed by input from the district testing committee made up of principals, counselors, and teachers from all K-12 levels and representative of the district's five attendance areas and Title I staff.

2. Components of this practicum were developed and needed resources were identified. The workshops were completed as reported above. A testing handbook was planned and developed based on data collected from workshop participants' input from the district test committee and the district testing office.
3. A testing expert, cost free to the district, was identified to provide inservice workshops.
4. The human effort, product development, typing, type setting, and printing costs follow:

Item	Description	Hours	Cost
1)	30 elementary principals	75	$ 862.50
2)	35 elementary teachers	87.5	1,093.75
3)	5 junior high principals	12.5	156.25
4)	6 junior high counselors	15	202.50
5)	5 high school principals	12.5	184.37
6)	19 high school counselors	47.5	641.25
7)	5 district curriculum specialists	15	172.50
8)	13 test committee members	39	526.50
9)	1 district administrator	40	540.00
10)	1 test and measurement consultant	8	150.00
11)	1 test and measurement consultant to edit handbook	24	150.00
12)	typing evaluation instruments, handouts, and handbook	40	160.00
13)	printing and assembling	24	500.00

Item	Description	Hours	Cost
14)	collecting and analyzing data for final report	40	500.00
15)	writing final report	16	400.00
16)	paper and office supplies		115.00
17)	diagnostic profiles Reading Development	50	550.00
	printing and set up		2,500.00
18)	diagnostic profiles Math Development	50	550.00
	printing and set up		2,500.00
19)	criterion reference tests for math and reading	137	1,507.00
20)	printing and type set		2,800.00

Many hours were spent on this practicum which were not recorded. Those hours recorded total 733. The total dollar cost of this practicum for type set up, printing and district costs for all persons involved except the writer were estimated at $16,761.62.

Printing costs are always high for the first printing because of type setting costs. Reproduction of diagnostic profiles are estimated at 29¢ per unit. Test (C.R.T.) reprints are 3 - 4¢ per unit. Because of the size of diagnostic profiles (legal) printed on four sides the district print shop could not print it. An outside vendor was used for printing.

EVALUATION OF THE PRACTICUM

The evaluation of the practicum was built around the four major objectives that were met in the development of the district testing committee, the

testing handbook, the provision of testing workshops, and the development of diagnostic profiles and criterion reference tests.

1. The installation of the district testing committee was a great success. Teachers, counselors, and principals for the first time indicate that test selection for our district is consistent and the process used is sensitive to the needs of teachers and programs.

   Samples of minutes of our district testing committee meetings may be found in Appendix J. The district testing committee meets regularly to facilitate communications for the entire district through attendance area meeting representatives.

2. The testing handbook has been a usable tool in federal project schools. Comments from principals, teachers, and resource personnel in those schools indicate it has been put to good use.

3. Testing Workshops

   A self-appraisal inventory was administered to workshop participants on a pre-post basis to ascertain gains made. Since the instrument used was a self-appraisal, care was taken to apprise participants of its use and they were asked not to identify themselves and to take as much time as needed to complete it.

   Results of the self-appraisal inventory administered to workshop participants and test committee members may be found in Tables I, II, III, and IV as follows.

TABLE I

Section A	WORKSHOP PARTICIPANTS		TEST COMMITTEE MEMBERS	
Question	Pre-Test N-100	Post-Test N-98	Pre-Test N-13	Post-Test N-13
1	6.0	6.9	5.2	7.8
2	5.1	7.8	4.2	4.6
3	4.0	6.0	4.7	8.7
4	6.3	7.6	5.2	8.1
5	3.5	6.7	4.3	6.6
6	4.6	6.1	4.3	6.6
7	3.5	7.8	4.5	6.8
8	5.5	6.1	4.5	6.8
9	4.5	7.3	4.5	7.1
Totals	4.8	6.9	4.6	7.0

Table I reports gains in raw score points (RSP) between pre and post self-appraisal inventory administered to both groups. Section A of the inventory dealt with understanding computer scoring reports. Note that workshop participants' gain was 2.1 while the testing committee members posted a RSP gain of 2.4. Questions 1 through 9 may be seen on the self-appraisal inventory in Appendix D.

TABLE II

Section B	WORKSHOP PARTICIPANTS		TEST COMMITTEE MEMBERS	
Question	Pre-Test N-100	Post-Test N-98	Pre-Test N-13	Post-Test N-13
10	5.1	7.7	6.7	8.2
11	5.0	7.7	6.7	8.2
12	4.1	7.4	6.7	8.3
13	5.0	7.7	5.0	6.6
14	4.1	6.6	4.0	5.5
15	4.5	5.3	3.0	3.5
Totals	4.1	7.1	5.4	6.7

Table II reports gains in raw score points (RSP) between pre and post administration of the self-appraisal inventory. Section B inventoried the ability of both groups to understanding the meaning of test scores as indicated by scoring terms such as raw score, percentile ranks, stanine, scaled score and p-value. Workshop participants gained 2.5 RSP while members of the test committee gained 1.3 RSP. Questions 10 through 15 may be seen in Appendix D.

TABLE III

Section C	WORKSHOP PARTICIPANTS		TEST COMMITTEE MEMBERS	
Question	Pre-Test N-100	Post-Test N-98	Pre-Test N-13	Post-Test N-13
16	6.9	7.3	5.0	7.8
17	6.9	7.3	5.0	7.3
18	4.9	6.5	5.0	7.3
19	6.6	6.1	6.5	7.6
20	7.0	7.7	6.5	8.2
21	4.0	6.8	6.5	8.2
22	6.1	7.2	4.5	7.9
23	5.0	6.3	4.5	7.8
24	6.2	7.0	3.7	8.2
	6.0	7.0	5.2	7.8

Table III reports gains in raw score points (RSP) between pre and post self-appraisal inventory administered to both groups. Section C of the self-appraisal inventory assessed ability of participants in the application of measurement terms. Note that workshop participants' RSP gain was 1.0 while test committee members gained 2.6 RSP's. Questions 16 through 24 may be reviewed in Appendix D of this study.

TABLE IV

Workshop Participants' Total Gain	5.6
Test Committee Members' Total Gain	6.3

Table IV reports total raw score points (RSP) gains for both groups for Sections A, B and C of the self-appraisal inventory. The inventory as administered may be found in Appendix D of this study.

The teachers', counselors', and principals' overall gain was 5.6 raw score points; other observations are in order. Principals indicated under the additional comments section of the post self-appraisal inventory survey that teachers were, after participating in the testing workshops, making a much greater effort to interpret student test results. Twenty-six elementary principals indicated that these results were used extensively during parent-teacher conferences and especially helpful were the individual student profiles provided with test results to help teachers plan for individual students. Junior high principals indicated that counselors who attended the workshops reported that the workshops were well worth the time and effort and for the first time felt comfortable enough with the test results to provide evening test interpretation meetings for parents and teachers. One junior high principal stated that his counselors held sessions with students (each student was given his own individual profile card) to review individual results. The chairman of the senior high principals indicated that he felt the workshops were valuable and should be continued annually.

In the writer's opinion, the district testing committee's gain of 6.3 raw score points was a good indication that the teachers, principals, and counselors, not on the testing committee, were honest in their self-appraisal since their overall gain highly correlates (5.6) with the committee's. The writer expected that the testing committee's overall gain to be much higher than other participants since their total involvement in planning the workshops placed them in a less threatening position. Both group surveys, however, indicated that the workshops were valuable and that they should be continued on an annual basis.

4. Development of diagnostic profiles and criterion reference tests

The diagnostic profiles and criterion reference tests that were developed are now installed in our Title I and Early Childhood Education schools. The process was expensive but it has turned out to be a good investment. Teachers for the first time, as a result of the study, have a management system to record students' grades and monitor students' progress toward program objectives.

FURTHER APPLICATION OF THE PRACTICUM

In talking with test publishing consultants, it was learned that district-wide test committees were not common; in fact, the writer was told Fremont was the only district to their knowledge that had one. The writer's colleagues in neighboring districts (directors of testing) were curious about our district's test selection process. This fact was based on the number of telephone calls the writer has received in regard to our testing program.

As a result of working closely with the test publisher, Harcourt, Brace and Jovanovich, Inc., whose consultant, Paul Kullman, provided our test analysis and interpretation workshops, the writer was asked to assist in the planning of two of their Bay Area workshops on tests and measurements (see Appendix G).

During the planning, development, and implementation of this practicum the writer had many occasions to contact the State Department of Education, Division of Testing and Evaluation for information and sharing of ideas.

Because of this relationship the writer was asked to share his ideas with the State on how to facilitate utilization and dissemination of the California Assessment Program and to assist in the development of ideas for a communications handbook for that program to be distributed to all districts (schools) in the State of California (see Appendix H).

Because of using the concept of a district testing committee, the development of a testing handbook, and providing testing inservice workshops, it is felt by the writer that a model testing program has been constructed and is adopted for use in the district and now can be shared with other districts.

The proper administration of tests and a more accurate use of results from tests has had great implications. It has produced the following results that will be of benefit to the workshop participants and other teachers, counselors, and principals in the state and nation if they choose to adopt and implement these procedures.

1. Workshop participants gained an increased knowledge and awareness of proper test administration and how these affect final results and eventually curriculum.
2. It has sophisticated teacher, counselor, and principal assessment tools.
3. It can give direction for planning curriculum on an individual basis.
4. It will lessen the fears of the teacher, counselor, and principal when they are working with test results.

OBSERVERS OF THE PRACTICUM

Three persons, identified below, monitored and evaluated this practicum.

1. Phil Brazil
   Associate Superintendent
   Fremont Unified School District
   40775 Fremont Boulevard
   Fremont, California 94538
2. John Mazzone
   Principal, Adult School
   Fremont Unified School District
   40775 Fremont Boulevard
   Fremont, California 94538
3. Wess Peterson
   Assistant Superintendent for Personnel
   Fremont Unified School District
   40775 Fremont Boulevard
   Fremont, California 94538

Appendix A

DISTRICT-WIDE TEST COMMITTEE MEMBERS

Phil Brazil	Associate Superintendent
Paul Bonaccorsi	Vice Principal, American High
Doug Carr	Assistant Principal, Irvington High
Loran Coburn	Principal, Robertson Jr. High
Jan Coleman	Counselor, Thornton Jr. High
Phil Holmes	Principal, Mattos
Bob Lewis	Principal, Patterson
Tom Lord	Principal, Grimmer
Gary Morse	Teacher, Mission Valley
Vance Nelson	Principal, Mission San Jose High
Walt O'Neill	Principal, Horner
John Peacock	Principal, Fremont
Roy Piper	Reading Specialist, District Office
Kurt Lile	Director Federal and State Projects

Appendix B

SUBCOMMITTEE MEMBERS

FOR REVIEWING AVAILABLE TESTS

Tom Lord, Chairperson	Principal, Grimmer
Ed Childress	Principal, Glenmoor
Dee Clark	Principal, Hirsch
Loran Coburn	Principal, Robertson Jr. High
Hal Erickson	Principal, Gomes
Pat Hall	Reading Specialist, Patterson
Dale Hinman	Math Teacher, Walters Jr. High
Martin Jacobs	Title I Math Specialist, Durham & Grimmer
Bob Lewis	Principal, Patterson
Ann Lord	MGM Coordinator, District Office
Geraldine Mirandi	Teacher, Glenmoor
Norm Nester	Counselor, Horner Jr. High
Bob Riley	Math Teacher, Kennedy High
Gene Sare	Teacher, Noll
Will Sawyer	Principal, Kennedy High
Bob Stone	Eng. Teacher, Mission San Jose High
Ed Turner	Principal, Mowry
Dave Valentine	Assistant Principal, Irvington High
Elaine Zahtilla	MGM Teacher, Glenmoor

Appendix C

April 26, 1973

The Subcommittee's report to the District Test Committee was made on April 26 by Tom Lord as follows:

The Subcommittee recommends that the following proposal be considered:

1. That standardized achievement tests be utilized for program evaluation.

2. That the standardized achievement test be the New Stanford '72 Achievement Test.* (Subsequent to this recommendation, it was learned that Westinghouse Test Services would not be permitted to score this test which would have the effect of:

   a. Losing the free consultancy service from this company,
   b. Could cost the District an additional $6,000, and
   c. To mail the tests to Iowa is a cumbersome task and it is not efficient to do so.)

3. That standardized achievement tests be administered in Grades 3, 6 8 and 12 next year.

4. That the standardized test adopted for use be tuilized for a minimum of four years.

5. That the Fremont Behavioral Objectives Mathmatics Tests in all grades be used next year.

6. That the Test Committee could establish a minimum of 25¢ per pupil to be budgeted for K-6 schools. This would provide schools with an opportunity to buy some diagnostic and evaluative type tests for which they would have an obligation to report their results to the Test Committee. The intent of this section is to provide each school with an opportunity to meet their own needs.

7. That a task force be formed to study the development and possible implementation of a Fremont Unified School District criterion reference testing program, K-12.

8. That the revised or complete Santa Clara Inventory Test be used for Kindergarten.

*S.R.A. 71 and I.T.E.D. 71 tests will be reviewed by the testing sub-committee as a possible alternative. These instruments seem to meet three basic requirements of the sub-committee, (1) they are current tests (2) they span grades 1 - 12 (3) they are processed by the same company, therefore correlation tables are available.

FREMONT UNIFIED SCHOOL DISTRICT

DISTRICT-WIDE TEST COMMITTEE

MINUTES

Those in attendance at the May 22, 1973 District-Wide Test Committee were:

Mr. Lord
Mr. Piper
Mr. Eicher
Mr. Coburn
Mr. Holmes
Mr. Mazzone (Excused)
Mr. Bonaccorsi
Mr. Valentine
Mr. Lile

LANGUAGE DOMINANCE INDEX

Mr. Lile stated that this test is State mandated by the California Legislature and would have to be added to our test schedule and be administered to Non-English-speaking and Limited-English-speaking children in our schools in March 1974. Results are due in the State Department of Education on April 1, 1974. Principals will be asked to survey their needs and request tests from the Federal & State Projects Office.

PHYSICAL FITNESS TESTING

The State Board of Education has adopted the same testing schedule for next year as was used this year. Grades to be tested are 5, 7 and 10 and in the same areas.

BOARD POLICY NO. 512.70 (SB-1)

Mr. Lile has requested Mr. Peterson to recommend to the School Board, removal of Board Policy No. 512.70.

RECOMMENDATIONS FOR TEST SCHEDULE 1973-74 SCHOOL YEAR

Mr. Mazzone, Mr. Peacock, Mr. Piper and Mr. Lile recommended that we stay with our test schedule as now being given but do some pilot testing in both SRA and Stanford at the grade levels recommended by the testing Sub-Committee. Mr. Holmes (Washington Attendance Area) stated that the Gates-MacGinitie test is better than the Metropolitan. Mr. Tranchina said that the American Attendance Area would like to have the Santa Clara Inventory test given at the kindergarten level, but that a workshop should be given to familiarize the teachers with both the procedures and activities. Mr. Eicher recommended that we not test the kindergarten next year. Irvington Attendance Area wants to do away with the Metropolitan test, otherwise no comment as there was not enough time to study the different tests at that level. Mr. Piper stated that the Gates-MacGinitie will be given at the beginning of the first grade. Mr. Coburn (junior high spokesman) said that they recommend the FUSD Math Objective Test be given to the eighth graders in March.

PILOT TESTING - SRA '71 and STANFORD '73

The Committee agreed that pilot testing will be done in grades 3, 6 and 7 (150 students each) in both the SRA '71 and Stanford '73. This will give the Committee usability information to analyze before making a decision on what tests are to be used in the 1974-75 school year. Since the State in mandating Comprehensive Tests of Basic Skills at the sixth grade level, it was recommended that we stay with what we are doing, pilot test and reorganize the test schedule for next year after pilot results are analyzed.

A COMPARISON OF: THE STANFORD ACHIEVEMENT TEST/TASK, 1973 AND
SRA ACHIEVEMENT MULTILEVEL/ITED

The tests are compared at three different levels on the basis of the types of cognitive skills* that the questions within the sections of Vocabulary, Reading Comprehension, Language, and Spelling require for answers.

LEVEL	TEST SECTION	STANFORD	SRA
INTERMEDIATE STANFORD: INTERMEDIATE I - 4.5 - 5.4 SRA MULTILEVEL: BLUE - 4 - 6	VOCABULARY	1. Knowledge of specific facts. a) Vocabulary word is put in a context where the correct choice furnishes a complete thought. b) Less discrimination is required; here the wrong choices aren't as closely associated to the key word as are the SRA choices.	1. Knowledge of specific facts. a) Vocabulary word is put in simple phrase; therefore, there are fewer contextual clues for the reader. b) More discrimination is required; wrong choices are closer to the meaning of the key word.
	READING COMPREHENSION	1. Knowledge of specific facts. a) Emphasis is on recall of fact. One-half of the questions ask the reader to recall information from the passage. 2. Comprehension skills. a) Translation questions. b) Simple inference. c) A very low % of the questions ask the reader to interpret.	A variety of thinking skills are required with the inclusion of higher order ones. 1. Interpretation. a) The reader must define vocabulary in context of passage. 2. Extrapolation. 3. Application.

*Based on Bloom's Toxonomy of Educational Objectives, Handbook I; Cognitive Domain.

LEVEL	TEST SECTION	STANFORD	SRA
INTERMEDIATE	WORD STUDY	1. Knowledge of conventions. Decoding principles required. a) Phonics. b) Combining word parts to make English words.	1. None
	LANGUAGE	1. Knowledge of conventions. a) Mechanics--punctuation, verb tense, pronoun agreement, etc.	1. Knowledge of conventions. a) Mechanics--usage and punctuation. 2. Comprehension skills of translation and interpretation. a) Reading for meaning--the reader is asked to paraphrase and to give the type of information for which the question asks.
	SPELLING	1. Knowledge of specifics. 2. Knowledge of conventions. a) Reader must find the misspelled word. One of the 4 words is misspelled.	1. Knowledge of specifics. 2. Knowledge of conventions. a) Reader must find the misspelled word. This section is more difficult than the Stanford spelling section because none of the 4 words are necessarily misspelled.

LEVEL	TEST SECTION	STANFORD	SRA
GRADES 7 - 9 STANFORD - ADVANCED SRA - GREEN & RED	VOCAB-ULARY	SEE INTERMEDIATE LEVEL--SAME COMPARISON	
	READING COMPREHENSION	1. Knowledge of specific facts. a) Recall questions comprise a sizeable % of the items. 2. Interpretation. a) More inference is included at this level than at the intermediate. b) A low % of the questions ask the reader to summarize or to find the main idea.	1. Knowledge of specific facts. a) The proportion of recall questions to other types is low. 2. Translation. 3. Interpretation. 4. Application. 5. Analysis.
	LANGUAGE	1. Knowledge of conventions. a) The mechanics of usage and of 2. structure are emphasized. See pages 20-22.	1. Knowledge of conventions. 2. Comprehension--translation and interpretation. Both mechanics and meaning are emphasized. The relationship between form and content is recognized. See pages 28-29.
	SPELLING	SEE INTERMEDIATE LEVEL--SAME COMPARISON	

LEVEL	TEST SECTION	STANFORD	SRA
GRADES 9 - 12 STANFORD - TASK SRA - IOWA TED	VOCABULARY	1. Knowledge of specific facts. 2. Comprehension: Interpretation. a) The reader must categorize words under proper heading.	SAME AS LOWER LEVELS. a) Discrimination required.
	READING COMPREHENSION	1. Interpretation. 2. Application. There is still inclusion of an inordinate amount of: a) Recall of fact and simple translation questions.	Here more sophisticated thinking is asked for: 1. Interpretation. 2. Application. 3. Analysis. The Iowa would be more difficult than TASK. The passages, in addition to requiring higher thinking skills, have: a) Longer sentences. b) Vocabulary that is less commonly used or seen. c) The passages are longer.

FREMONT UNIFIED SCHOOL DISTRICT

Federal & State Projects Office

TEST SCHEDULE

1973-1974

GRADE	TEST	CATEGORY	TIME SCHEDULE	STATE REQ'D	DIST. REQ'D	TO BE GIVEN
KDG.	Santa Clara Inventory	Pre-Post	Oct. - March		Optional	1 to each School upon Request
1	Matrix Sampling	Reading	Nov.	X		To Be Announced
3	SRA '71	Battery	March		X	March 4 - March 15
* 3	PILOT = Stanford '73	Reading and Math	Nov. or March		X	150 Students
4	Comprehensive Tests of Basic Skills - Q^2	Battery	March		X	March 11 - March 26
5	Comprehensive Tests of Basic Skills - R^2	Battery	March		X	March 11 - March 26
* 5	PILOT= SRA '71 / Stanford '73	Battery	Nov. or March		X	150 Students
6	Comprehensive Tests of Basic Skills - Q^2	Battery	Oct.	X		Oct. 8 - Oct. 19
* 7	PILOT = SRA '71 / Stanford '73	Battery	Nov. or March		X	150 Students
8	Comprehensive Tests of Basic Skills - Q^3	Reading and Language	March		X	March 11 - March 26
8	F.U.S.D. Math Behavioral Objective	Math	March		X	March 11 - March 26
Kdg. thru 12	Language Dominance Index		March	X		March 4 - March 15
12	Iowa Tests of Educational Development - X4	Tests 3 - 4 and 5	Oct.	X		Oct. 8 - Oct. 19
5 - 7 & 10	Physical Performance Test		April and May	X		April 1 - May 24

* If tests arrive early enough will be administered in November. 150 students will be tested in each test at the three grade levels.

Dec0673

FREMONT UNIFIED SCHOOL DISTRICT

DISTRICT-WIDE TESTING COMMITTEE MEETING 34

MINUTES

February 5, 1974

Those present at the meeting were as follows: Kurt Lile, Loran Coburn, Phil Holmes, Tom Lord, John Mazzone, Paul Bonaccorsi, Roy Piper, Doug Carr, Walt O'Neill, and Gary Morse.

All members were present except John Peacock who had a conflict of meetings. Walt O'Neill represented Ted Eicher for Irvington. Paul Bonaccorsi represented Joe Tranchina for American Attendance Area. Gary Morse, teacher at Mission Valley, is a new member to the Committee representing the classroom teachers. He will be available to report any information of the Testing Committee to teacher groups making such requests.

AGENDA ITEM #1, SRA TESTING - GRADE 3

The discussion was opened by John Mazzone stating that since the district is considering the Stanford Achievement Test for next year would it be possible to substitute Stanford Third Grade Achievement for the SRA that is planned for March 1974, and since the sub-committee and the attendance area representative reports favored the Stanford?

Motion was made by Tom Lord and seconded by John Mazzone that Stanford Test (Math, Reading, Language Arts) be substituted for the SRA Test in grade three for March, 1974. Motion passed.

AGENDA ITEM #2, 8TH GRADE TESTING

There was discussion on using Stanford or C.T.B.S. for eighth grade testing next year to insure comparability. Mr. Coburn agreed to take our recommendation by to junior high principals for approval to use Stanford for 1974-75 school year.

AGENDA ITEM #3, TEST SCHEDULE FOR 1974-75

A motion was made by Tom Lord, seconded by Phil Holmes, that Stanford tests be given in grades 1-12 based on priority of need and cost if the Harcourt, Brace and Jovanovich Company can guarantee the services of the West Coast Westinghouse Scoring Center with a ten work day return time. Motion passed unanimously.

ADDED ITEMS ON THE AGENDA

1. Paul Bonaccorsi and Doug Carr were given the charge to bring back information to the March meeting from the high school principals on the following:

   1) What grade level high schools want to test students.

   2) When do they want to test? What month based on norming of test?

   3) What test do they want to use?

The next meeting will be held March 12, 1974, in the Auditorium Conference Room.

Minutes taken by Roy Piper.

TEST SCHEDULE

1974-1975

GRADE	TEST	CATEGORY	TIME SCHEDULE	** STATE REQ'D	DIST. REQ'D.	TO BE GIVEN
1	ENTRY LEVEL TEST	Reading Readiness	Oct.	X		
1	Stanford Reading	Reading			X	
2	READING TEST	Reading	May	X		
2	Stanford Reading	Reading			X	
3	READING TEST	Reading	May	X		
3	Stanford Achievement	Read., Math & Lang.			X	
4	Stanford Achievement	Battery			X	
5	Stanford Achievement	Battery			X	
6				X		
6	Stanford Achievement	Battery			X	
8	Stanford Achievement	Reading & Math			X	
10	Stanford Achievement	Reading & Math			X	
12				X		
12	Stanford Achievement	Reading & Math			X	
5 - 7 & 10	Physical Performance Test		April & May	X		April 1 - May 23

**STATE - Testing on matrix-sampling basis.

SELF APPRAISAL INVENTORY

Appendix D

S.A.I.

A. I feel I am able to adequately read and understand the following scoring reports.

1. Individual Record Sheet	1	2	3	4	5	6	7	8	9
2. Class Summary Sheet	1	2	3	4	5	6	7	8	9
3. Administrators Summary of Average Scores	1	2	3	4	5	6	7	8	9
4. Permanent Record Label	1	2	3	4	5	6	7	8	9
5. Basic Item Report	1	2	3	4	5	6	7	8	9
6. Pupil Item Report	1	2	3	4	5	6	7	8	9
Distribution and Administrators Report:									
7. Part I	1	2	3	4	5	6	7	8	9
8. Part II	1	2	3	4	5	6	7	8	9
9. Part III	1	2	3	4	5	6	7	8	9

B. I feel I am able to adequately understand the following test scores.

10. Raw Score	1	2	3	4	5	6	7	8	9
11. Percentile Rank	1	2	3	4	5	6	7	8	9
12. Stanine	1	2	3	4	5	6	7	8	9
13. Grade Equivalent	1	2	3	4	5	6	7	8	9
14. Scaled Score	1	2	3	4	5	6	7	8	9
15. P-Value	1	2	3	4	5	6	7	8	9

C. Measurement Terms

16. Mean	1	2	3	4	5	6	7	8	9
17. Median	1	2	3	4	5	6	7	8	9
18. Mode	1	2	3	4	5	6	7	8	9
19. Standard Deviation	1	2	3	4	5	6	7	8	9
20. Percentile	1	2	3	4	5	6	7	8	9
21. Norms (Quartile)	1	2	3	4	5	6	7	8	9

22. I feel I am able to interpret pupil test data. 1 2 3 4 5 6 7 8 9

23. I feel I am able to interpret group test data. 1 2 3 4 5 6 7 8 9

24. I feel I am able to use test data as it applies to my situation. 1 2 3 4 5 6 7 8 9

Additional Comments - Be very specific in stating your needs.

E.C.E. & E.S.E.A. TITLE I FREMONT UNIFIED SCHOOL DIS
DIAGNOSTIC PROFILE - MATHEMATICS
LEVELS K-3

COLOR KEY
Taught in K-Red
Taught in 1-Blue
Taught in 2-Green
Taught in 3-Orange

NUMBER CODE
0-Exposed-No Mastery
1-Exposed-Incomplete 30-
2-Exposed-Mastery 80% +

LEVEL K	0	1	2
NUMBER AND NUMERATION			
A.1 MATCH OBJECT(S) TO CORRESPONDING NUMERAL			
A.2 COUNT THE NUMBER OF ELEMENTS IN A SET OF 10			
A.3 COMPARE THE SIZE OF TWO NUMERALS TO TEN			
0.01 CIRCLE THE NUMBERS OF A GIVEN SET 0-10			
0.04 IDENTIFY WHICH SET HAS MORE (0-10)			
0.05 IDENTIFY WHICH SET HAS LESS (0-10)			
0.06 IDENTIFY WHICH SET HAS THE MOST (0-10)			
0.07 IDENTIFY WHICH SET HAS THE LEAST			
0.08 IDENTIFY WHICH SETS ARE EQUIVALENT			
1. COUNT NUMBERS 1-100			
2. WRITE NUMBERS 1-30			
3. RECOGNIZE NUMBERS 1-30			
ADDITION			
B.1 BASIC FACTS THRU FIVE, WITHOUT THE USE OF COUNTERS			
B.2 BASIC FACTS THRU FIVE, WITH THE USE OF COUNTERS			
SUBTRACTION			
C.1 SEPARATING SETS THRU FIVE, WITHOUT THE USE OF COUNTERS			
C.2 SEPARATING SETS THRU FIVE, WITH THE USE OF COUNTERS			
FRACTIONAL NUMBERS			
0.12 IDENTIFY REGIONS THAT HAVE ½ SHADED			
GEOMETRY			
IDENTIFY A CLOSED CURVE (SIMPLE CLOSED CURVE)			
IDENTIFY OBJECTS OUTSIDE A CURVE			

LEVEL I	0	1	2
NUMBER AND NUMERATION			
A.1 COUNT TO 100			
A.2 COUNT THE NUMBER OF ELEMENTS IN A SET OF 100			
A.3 PLACE VALUE TO 100			
A.4 COMPARE THE SIZE OF TWO NUMERALS TO 100			
A.5 WRITE THE NUMERAL WHICH COMES NEXT			
1.03 READ ANY NUMERAL FROM 0-300 ALOUD			
1.04 NAME THE PLACE VALUE OF ANY DIGIT IN ANY NUMERAL FROM 0-300			
1.05 WRITE ANY NUMERAL FROM 0-300 WHEN THE TEACHER NAMES NUMBERS ORALLY			
1.06 WRITE THE NUMERAL THAT COMES NEXT (0-300)			
1.08 WRITE ANY NUMERAL FROM 0-300 IN EXPANDED FORM			
1.09 COMPARE ANY TWO NUMERALS FROM 0-300 USING <, >, OR =			
COUNT THE NUMBER OF ELEMENTS IN A SET TO 50			
ADDITION (BASIC FACTS TO 12)			
B.1 MISSING ADDENDS SUMS TO 12			
B.2 COLUMN ADD. TO 12 (3DIGITS)			
B.3 TWO DIGIT ADDITION WITH NO CARRYING TO 99			
1.11 WRITE THE SUMS FOR 30 REPRESENTATIVE ADDITION FACTS - SUMS (0-12) 3 MIN. TIME LIMIT			
1.13 DRAW ARROWS ON NUMBER LINES TO REPRESENT ADDITION FACTS SUMS 0 TO 12			

LEVEL II	0	1	2
NUMBER AND NUMERATION			
A.1 COUNT TO 300			
A.2 COUNT THE NUMBER OF ELEMENTS IN A SET OF 30			
A.3 COMPARE THE SIZE OF TWO NUMERALS TO 300			
A.4 WRITE NUMERALS TO 300 AND THE NUMERAL WHICH COMES NEXT			
2.03 WRITE ANY NUMERAL FROM 0-999 WHEN THE TEACHER NAMES NUMERALS ORALLY			
2.04 TELL THE PLACE VALUE OF ANY NUMERAL 0 TO 999			
2.05 WRITE ANY NUMERAL FROM 0-999 IN EXPANDED FORM			
2.06 WRITE THE NUMERAL THAT COMES NEXT 0 TO 999			
2.07 COMPARE ANY NUMERALS FROM 0 TO 999 USING <, >, OR =			
2.08 COUNT BY TENS FROM 0-990 USING MULTIPLES OF TEN ONLY			
2.09 IDENTIFY ORDINAL NUMERALS FIRST THRU TENTH			
ADDITION			
B.1 BASIC FACTS TO 18			
B.2 ADD ONE TO THREE DIGITS, NO RENAMING			
B.3 COLUMN ADDITION TO 18			
2.11 WRITE THE SUMS FOR 30 REPRESENTATIVE ADDITION FACTS (SUMS TO 18) 4 MIN. TIME LIMIT			
2.13 ADD 1 TO 2 DIGIT NUMBERS WITH RENAMING OF 10 ONES AS ONE TEN			
2.14 SOLVE NUMBER SENTENCES (SUMS TO 18)			
2.15 ADD DIMES AND PENNIES TO DEMONSTRATE UNDERSTANDING OF RENAMING			

LEVEL III	0	1	2
NUMBER AND NUMERATION			
A.1 READ NUMERALS TO 9,999			
A.2 WRITE NUMERALS TO 9,999 USING EXPANDED FORM			
A.3 COMPARE THE SIZE OF ANY TWO NUMERALS USING <, >, OR = TO 9,999			
A.4 WRITE NUMERALS TO 9,999 AND THE NUMERAL WHICH COMES NEXT			
3.01 WRITE NUMERALS WHEN TEACHER NAMES THEM ORALLY (0-99,999)			
3.02 GIVE PLACE VALUE OF ANY DIGIT OF ANY NUMERAL (0-99,999)			
3.03 WRITE NUMERALS IN EXPANDED FORM (0-99,999)			
3.04 WRITE THE NUMERAL THAT COMES NEXT (0-99,999)			
3.05 COMPARE ANY NUMERALS FROM 0-99,999 USING <, >, AND =			
ADDITION			
3.13 WRITE THE SUMS OF 30 REPRESENTATIVE FACTS 2 MIN. TIME LIMIT			
3.15 ADD AT LEAST FOUR ADDENDS (COLUMN ADDITION) OF ONE DIGIT EACH			
3.16 ADD ONE TO THREE DIGIT NUMERALS WITH RENAMING OF TEN ONES AS ONE TEN AND TEN TENS AS ONE HUNDRED			
3.17 ADD DOLLARS, DIMES & PENNIES, TO DEMONSTRATE UNDERSTANDING OF ADDITION WITH RENAMING			
SUBTRACTION			
3.20 WRITE THE DIFFERENCES FOR 30 REPRESENTATIVE SUBTRACTION FACTS 2 MIN. TIME LIMIT			
3.22 SUBTRACT ONE TO THREE DIGIT NUMERALS WITH RENAMING			

NAME _____

LEVEL K (Contd.)	0	1	2
GEOMETRY (CONTD.)			
IDENTIFY: 1. CIRCLES			
2. TRIANGLES			
3. RECTANGLES			
4. SQUARES			
5. OVALS			
6. DIAMONDS			
ADDITIONAL MATH SKILLS:			

LEVEL I (Contd.)	0	1	2
SUBTRACTION			
C.1 BASIC FACTS TO 12			
C.2 TWO DIGIT SUBTRACTION - NO RENAMING DIFFERENCE TO 99			
1.18 WRITE THE DIFFERENCES FOR 30 REPRESENTATIVE SUBTRACTION FACTS (DIFFERENCES TO 0-12) 4 MIN. TIME LIMIT			
1.20 DRAW ARROWS ON NUMBER LINES TO REPRESENT SUBTRACTION FACTS (DIFFERENCES 0-12)			
FRACTIONAL NUMBERS			
1.23 IDENTIFY $\frac{1}{4}$ AND $\frac{1}{2}$ OF A REGION			
MEASUREMENT			
K.1 MEASURE ANY LINE TO THE NEAREST INCH			
K.2 TIME TO THE NEAREST HOUR			
K.3 CONVERT MONEY AND MAKE CHANGE TO 10¢			
1.24 COMPARE SHAPES AS TO LONGER, SHORTER, OR SAME			
1.25 COMPARE SHAPES AS TO LONGEST, SHORTEST			
1.26 MEASURE ANY LINE SEGMENT TO THE NEAREST $\frac{1}{2}$ INCH			
IDENTIFY PENNY, NICKEL, AND DIME, AND THEIR VALUE			
COMPARE THE VALUE OF PENNY, NICKEL, AND DIME USING $<, >$, OR $=$			
GEOMETRY			
IDENTIFY OBJECTS INSIDE, OUTSIDE, OR ON A CLOSED CURVE			
ADDITIONAL MATH SKILLS:			

LEVEL II (Contd.)	0	1	2
ADDITION (CONTD.)			
2.16 SOLVE WORD PROBLEMS USING ADDITION FACTS (SUMS TO 18)			
SUBTRACTION			
C.1 BASIC FACTS TO 18			
C.2 SUBTRACT ONE TO THREE DIGITS NO RENAMING			
2.18 WRITE THE DIFFERENCES FOR 30 REPRESENTATIVE SUBTRACTION FACTS (DIFFERENCES TO 18) 3 MIN. TIME LIMIT			
2.21 SOLVE NUMBER SENTENCES USING SUBTRACTION			
2.23 SUBTRACT 1 TO 2 DIGIT NUMBERS WITH RENAMING OF 1 TEN AS TEN ONES			
2.24 SOLVE WORD PROBLEMS USING SUBTRACTION FACTS (DIFFERENCES TO 18)			
2.25 SUBTRACT DIMES AND PENNIES AND RENAME ONE DIME AS 10 PENNIES			
MULTIPLICATION			
D.1 BASIC FACTS THROUGH 2 X 10 WITH INVERSES			
FRACTIONAL NUMBERS			
2.29 IDENTIFY $\frac{1}{2}$, $\frac{1}{4}$, AND $\frac{3}{4}$ OF A REGION OR SET			
2.30 IDENTIFY 1/3, 2/3, OF A REGION OR SET			
MEASUREMENT			
2.33 MEASURE ANY SEGMENT IN FEET AND INCHES			
ADDITIONAL MATH SKILLS:			

LEVEL III (Contd.)	0	1	2
SUBTRACTION (CONTD.)			
3.23 SUBTRACT DOLLARS, DIMES, AND PENNIES TO DEMONSTRATE UNDERSTANDING OF SUBTRACTION WITH RENAMING			
3.24 SOLVE ONE STEP WORD PROBLEMS USING ADDITION AND SUBTRACTION INCLUDING RENAMING			
MULTIPLICATION			
D.1 BASIC FACTS THROUGH 5 X 5 WITH INVERSES			
3.28 WRITE THE PRODUCTS FOR 30 REPRESENTATIVE MULTIPLICATION FACTS (0'S TO 9'S) 4 MIN. TIME LIMIT			
3.30 MULTIPLY ONE TO THREE DIGIT NUMERALS BY ONE DIGIT MULTIPLIERS			
DIVISION			
E.1 ALL FACTS THROUGH 25 ÷ 5			
3.34 WRITE THE QUOTIENTS FOR 30 REPRESENTATIVE DIVISION FACTS (0'S TO 9'S) 4 MIN. TIME LIMIT			
F. NUMBER THEORY			
IDENTIFY ANY INTEGER AS ODD OR EVEN			
FRACTIONAL NUMBERS			
G.1 NAME THE LARGER OR SMALLER OF TWO FRACTIONS TO EIGHTHS			
3.36 IDENTIFY ANY FRACTIONAL PART OF A SET (DENOMINATORS UP TO 8) LESS THAN OR EQUIVALENT TO 1			
3.37 IDENTIFY ANY FRACTIONAL PART ON A NUMBER LINE, (DENOMINATORS UP TO 8) LESS THAN OR EQUIVALENT TO 1			
3.38 IDENTIFY EQUIVALENT FRACTIONS TO EIGHTHS			

LEVEL K (Contd.)	0	1	2
ADDITIONAL MATH SKILLS:			

LEVEL I (Contd.)	0	1	2
ADDITIONAL MATH SKILLS:			

LEVEL II (Contd.)	0	1	2
MEASUREMENT (CONTD.)			
2.34 USING PENNIES, NICKELS AND DIMES, SHOW ANY AMOUNT OF MONEY UP TO 99¢			
2.35 USING HALF DOLLARS, QUARTERS, DIMES, NICKELS AND PENNIES, SHOW ANY AMOUNT OF MONEY UP TO 99¢			
K.2 MEASURE CLOCK TIME TO HALF-HOUR			
ADDITIONAL MATH SKILLS:			

LEVEL III (Contd.)	0	1	2
MEASUREMENT			
K.1A MEASURE ANY LINE TO THE NEAREST ½ INCH			
K.1B MASTER EQUIVALENT 3 FEET = 1 YARD			
K.2A CLOCK TO NEAREST ½ HOUR			
K.3A MASTER EQUIVALENTS: 7 DAYS = 1 WEEK, 24 HOURS = 1 DAY, 12 MONTHS = 1 YEAR			
K.3B COMPUTATION INVOLVING ADDITION, SUBTRACTION AND MULTIPLICATION, USING TIME			
K.4 ADD AND SUBTRACT MONEY TO $1.00			
K.5 IDENTIFY $ AND DECIMAL POINT			
3.40 TELL TIME TO NEAREST 5 MIN.			
ADDITIONAL MATH SKILLS:			

LEVEL K (Contd.)	LEVEL I (Contd.)	LEVEL II (Contd.)	LEVEL III (Contd.)	SCORES FOR STUDENTS REPEATING A GRADE - GRADE REPEATED____
STANDARDIZED TEST RESULTS: NAME OF TEST _____ PRE DATE _____ T.S. G.E. Q.	STANDARDIZED TEST RESULTS: NAME OF TEST _____ PRE DATE _____ T.S. G.E. Q.	STANDARDIZED TEST RESULTS: NAME OF TEST _____ PRE DATE _____ T.S. G.E. Q.	STANDARDIZED TEST RESULTS: NAME OF TEST _____ PRE DATE _____ T.S. G.E. Q.	STANDARDIZED TEST RESULTS: NAME OF TEST _____ PRE DATE _____ T.S. G.E. Q.
POST DATE _____ T.S. G.E. Q.	POST DATE _____ T.S. G.E. Q.	POST DATE _____ T.S. G.E. Q.	POST DATE _____ T.S. G.E. Q.	POST DATE _____ T.S. G.E. Q.
NAME OF TEST _____ PRE DATE _____ T.S. G.E. Q.	NAME OF TEST _____ PRE DATE _____ T.S. G.E. Q.	NAME OF TEST _____ PRE DATE _____ T.S. G.E. Q.	NAME OF TEST _____ PRE DATE _____ T.S. G.E. Q.	NAME OF TEST _____ PRE DATE _____ T.S. G.E. Q.
POST DATE _____ T.S. G.E. Q.	POST DATE _____ T.S. G.E. Q.	POST DATE _____ T.S. G.E. Q.	POST DATE _____ T.S. G.E. Q.	POST DATE _____ T.S. G.E. Q.

COMMENTS

LEVEL K: _____

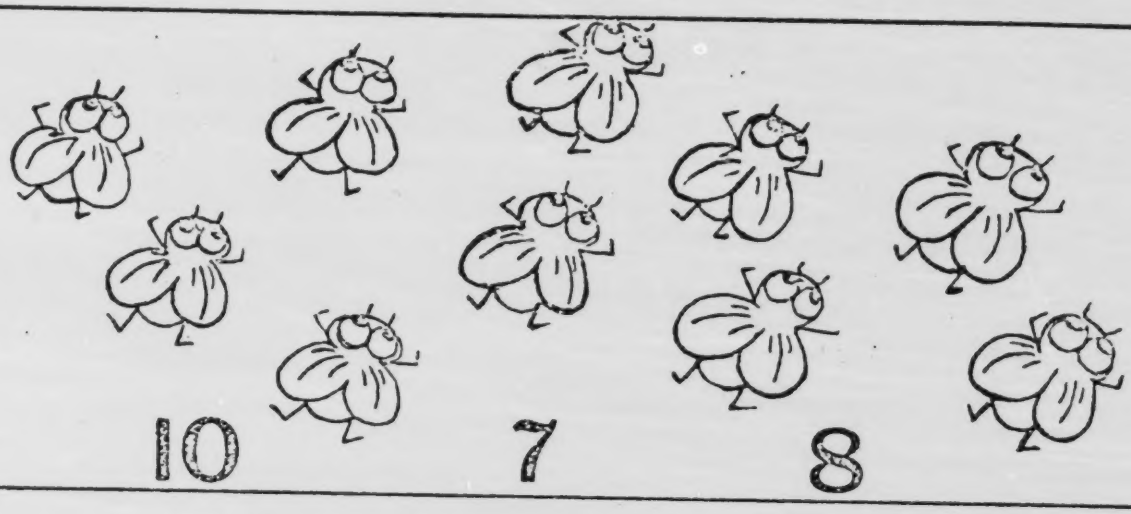
LEVEL I: _____

LEVEL II: _____

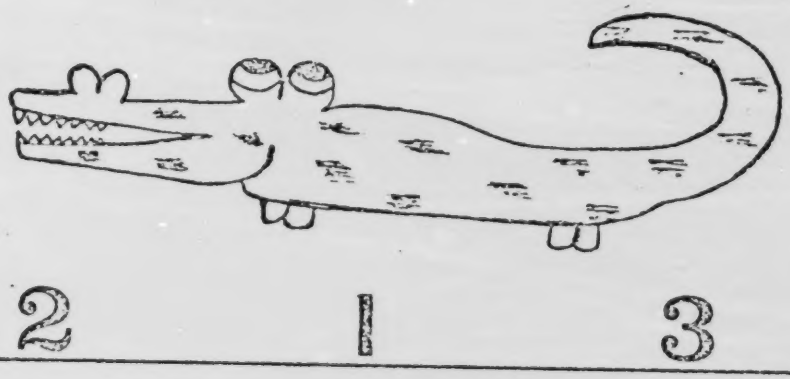
LEVEL III: _____

MISC.: _____

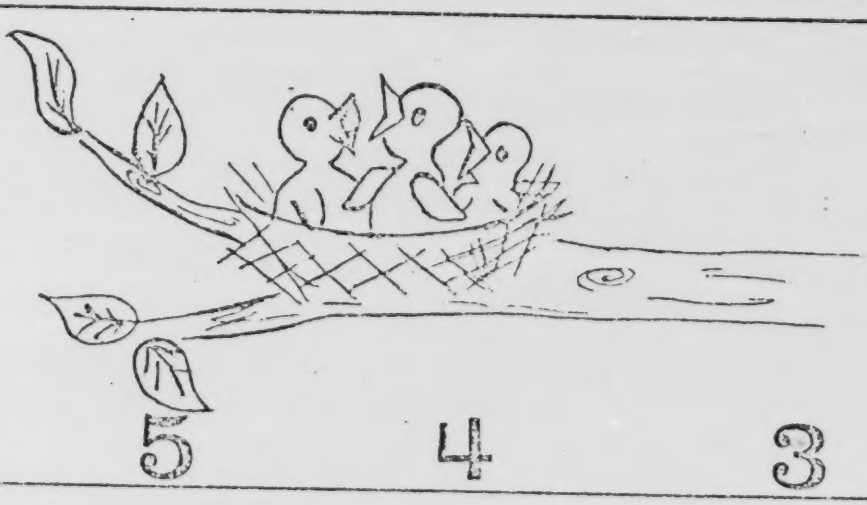
1 Count the flies and circle the correct numeral.

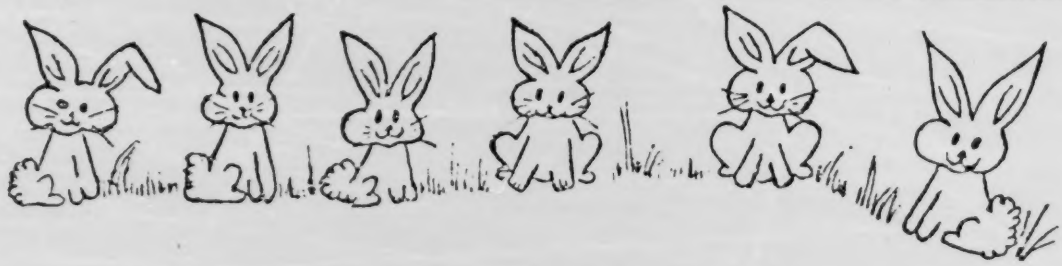
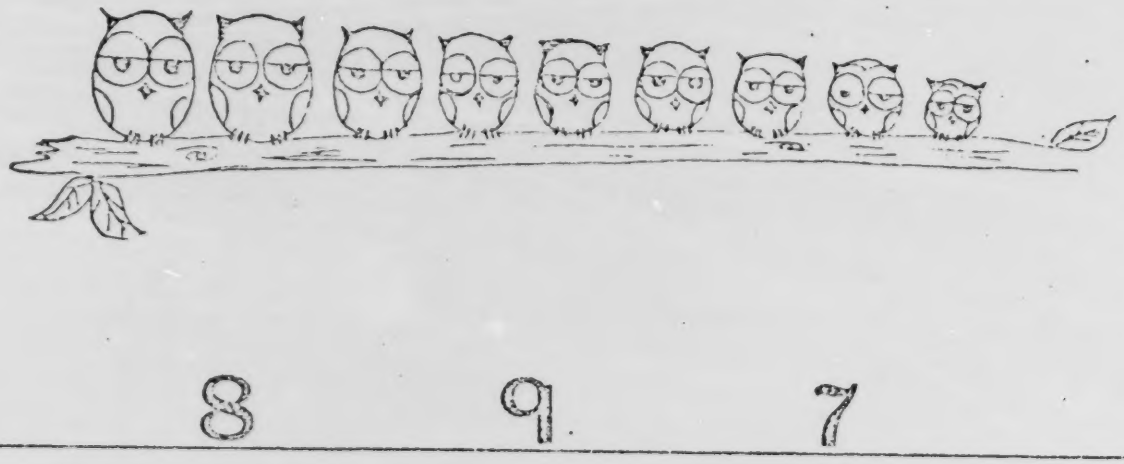


2 Count the crocodile(s) and circle the correct numeral.

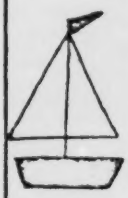


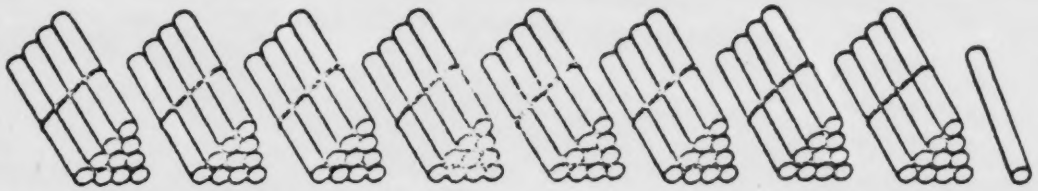
3 Count the birds and circle the correct numeral.



4	Count the clowns and circle the correct numeral.
5	Count the rabbits and circle the correct numeral.
	
6	Count the owls and circle the correct numeral.
	

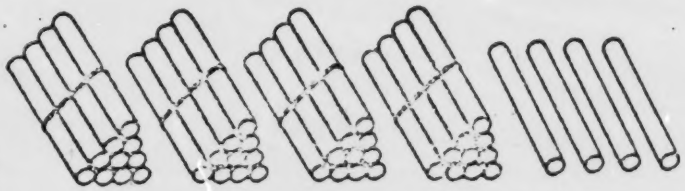
1 Write the numerals for the number of elements in the set.





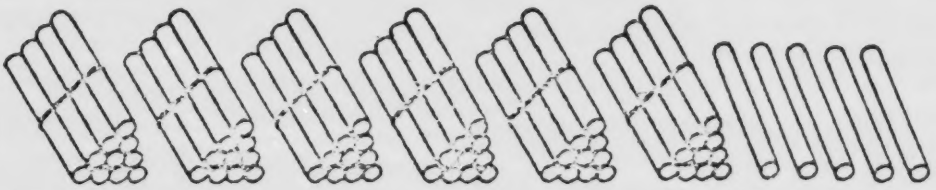
How Many? _____

2 Count the number of elements in the set and write the numeral.



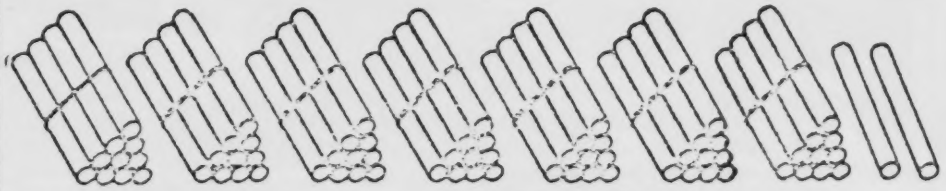
How Many? _____

3 Count the number of elements in the set and write the numeral.



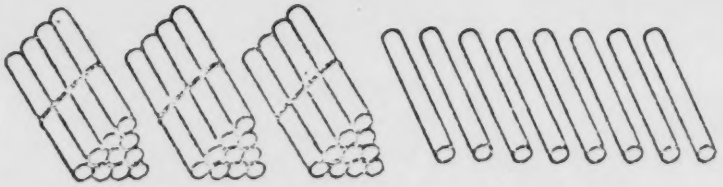
How Many? _____

4 Count the number of elements in the set and write the numeral.



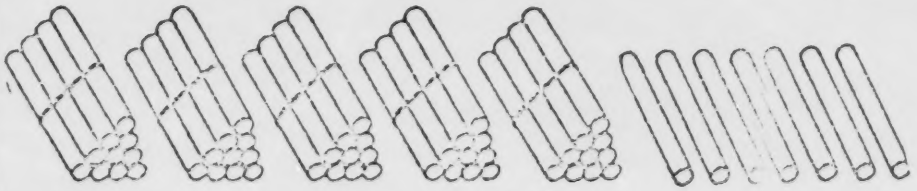
How Many? _____

5 Count the number of elements in the set and write the numeral.



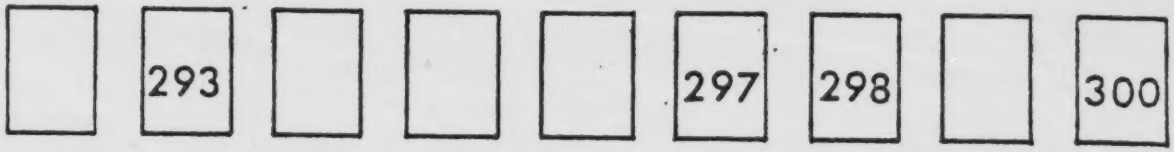
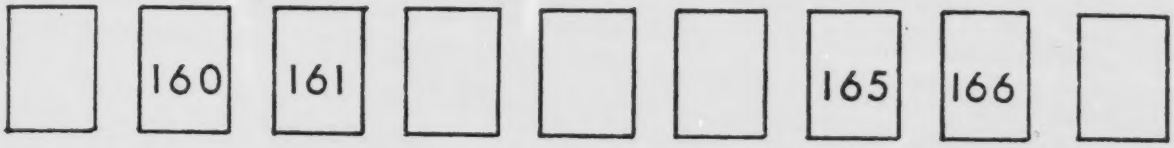
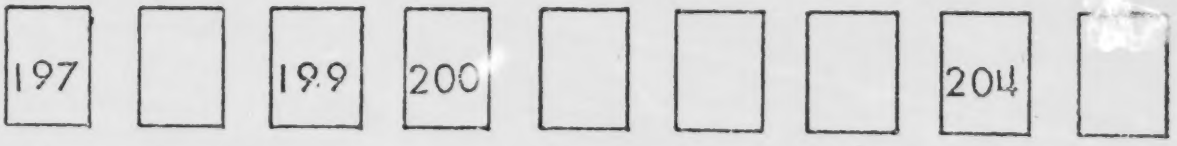
How Many? _____

6 Count the number of elements in the set and write the numeral.



How Many? _____

A4.1 NUMBER AND NUMERATION 1 COUNT TO 300

1	Fill in the boxes
	
2	Fill in the boxes
	
3	Fill in the boxes
4	Fill in the boxes
5	Fill in the boxes
	
6	Fill in the boxes

*A.1 NUMBER AND NUMERATION | READ NUMERALS TO 9,999

1 & 2	Write these numerals in short form
	1. Five thousand, six hundred fourteen _____ 2. Eight thousand, four hundred six _____
3 & 4	Write these numerals in short form
	3. Five thousand ninety _____ 4. Nine thousand, four hundred six _____
5 & 6	Write these numerals in short form
	5. Eight thousand, two hundred forty three _____ 6. Seven thousand nine _____

CIRCLE THE CORRECT ANSWER

EIGHTY SEVEN THOUSAND, FIVE HUNDRED, FIFTY ONE
WRITTEN AS A NUMERAL IS:

87,515 8,751 18,551 87,551 807,551

CIRCLE THE CORRECT ANSWER

NINETY TWO THOUSAND, FIVE HUNDRED, TWENTY ONE
WRITTEN AS A NUMERAL IS:

92,521 902,521 9,521 19,521 91,501

CIRCLE THE CORRECT ANSWER

TWENTY TWO THOUSAND, SIX HUNDRED, SEVENTY
WRITTEN AS A NUMERAL IS:

22,670 202,670 2,670 22,760 22,076

CIRCLE THE CORRECT ANSWER

FIFTY FIVE THOUSAND, SIX HUNDRED, NINETY FOUR
WRITTEN AS A NUMERAL IS:

55,694 505,694 5,694 5,964 55,964

CIRCLE THE CORRECT ANSWER

TWENTY FIVE THOUSAND, FIVE HUNDRED, TWENTY ONE
WRITTEN AS A NUMERAL IS:

25,251 205,521 2,502 2,521 25,521

CIRCLE THE CORRECT ANSWER

SIXTY TWO THOUSAND, SEVEN HUNDRED, THIRTY NINE
WRITTEN AS A NUMERAL IS:

62,379 602,739 6,273 6,239 62,739

A.1 NUMBER AND NUMERATION # READ NUMERALS TO 999,999

READ THE NUMERAL FOR THE FOLLOWING

TWO HUNDRED SEVENTY-SIX THOUSAND, FOUR HUNDRED, FIFTY-THREE

_____

READ THE NUMERAL FOR THE FOLLOWING

TWO HUNDRED SIXTY-SIX THOUSAND, FOUR HUNDRED, FIFTY-THREE

_____

READ THE NUMERAL FOR THE FOLLOWING

TWO HUNDRED EIGHTY-SEVEN THOUSAND, NINETY-FIVE

_____

READ THE NUMERAL FOR THE FOLLOWING

THREE HUNDRED TWENTY-SEVEN THOUSAND, FIVE HUNDRED NINETY-EIGHT

_____

READ THE NUMERAL FOR THE FOLLOWING

EIGHTY-FIVE THOUSAND, TWO HUNDRED THREE

_____

READ THE NUMERAL FOR THE FOLLOWING

NINE THOUSAND, SIXTY-FIVE HUNDRED, TWENTY-THREE

_____

A.1 NUMBER AND NUMERATION | READ NUMERALS TO 999,999

WRITE THE FOLLOWING NUMERALS AS A COMPACT NUMERAL

SEVEN HUNDRED AND THREE THOUSAND, TWO HUNDRED EIGHT

_____

WRITE THE FOLLOWING NUMERALS AS A COMPACT NUMERAL

SEVEN HUNDRED THOUSAND, SIX HUNDRED EIGHT

_____

WRITE THE FOLLOWING NUMERALS AS A COMPACT NUMERAL

NINE HUNDRED THIRTY FIVE THOUSAND, FOUR HUNDRED NINE

_____

WRITE THE FOLLOWING NUMERALS AS A COMPACT NUMERAL

FIVE HUNDRED SIXTY SIX THOUSAND, SIX HUNDRED SIXTY SIX

_____

WRITE THE FOLLOWING NUMERALS AS A COMPACT NUMERAL

SIX HUNDRED THOUSAND, FIVE HUNDRED SIXTY NINE

_____

WRITE THE FOLLOWING NUMERALS AS A COMPACT NUMERAL

EIGHT HUNDRED THOUSAND, SEVEN HUNDRED EIGHT

_____

E.C.E. and E.S.E.A. DIAGNOSTIC PROFILE - MATHEMATICS - I

NAME

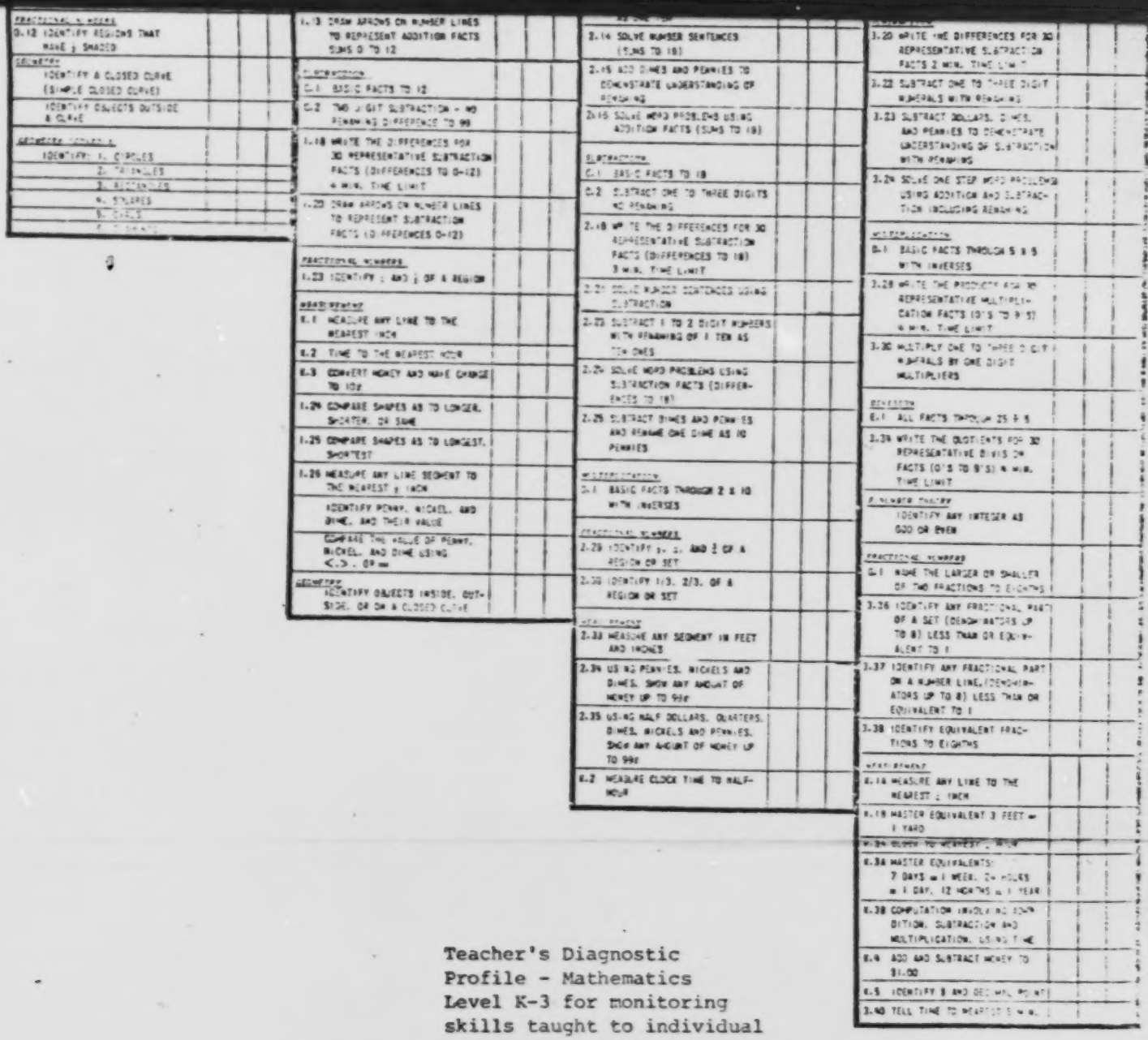
These class profiles are printed on manila tag board and are 11 x 18 in actual size.

NUMBER AND NUMERATION
A.1 COUNT TO 100
A.2 COUNT THE NUMBER OF ELEMENTS IN A SET OF 100
A.3 PLACE VALUE TO 100
A.4 COMPARE THE SIZE OF TWO NUMERALS TO 100
A.5 WRITE THE NUMERAL WHICH COMES NEXT
1.03 READ ANY NUMERAL FROM 0-300 ALOUD
1.04 NAME THE PLACE VALUE OF DIGIT IN ANY NUM. FROM 0-300
1.05 WRITE ANY NUM. FROM 0-300 WHEN THE TEACHER NAMES & ORALLY
1.06 WRITE THE NUMERAL THAT COMES NEXT (0-300)
1.08 WRITE ANY NUMERAL FROM 0-300 IN EXPANDED FORM
1.09 COMPARE ANY TWO NUMERALS FROM 0-300 USING <, >, OR =
COUNT THE NUMBER OF ELEMENTS IN A SET TO 50
ADDITION
B.1 MISSING ADDENDS SUMS TO 12 (BASIC FACTS TO 12)
B.2 COLUMN ADDITION TO 12 (3 DIGITS)
B.3 TWO DIGIT ADDITION WITH NO CARRYING TO 99
1.11 WRITE THE SUMS FOR 30 REP. ADD. FACTS (0-12) 3 MIN TIME LI
1.13 DRAW ARROWS ON NUMBER LINES TO REP. ADD. FACTS (0-12)
SUBTRACTION
C.1 BASIC FACTS TO 12
C.2 TWO DIGIT SUBTRACTION - NO RENAMING DIF. TO 99
1.18 WRITE THE DIF. FOR 30 REP. SUBTR. FACTS (DIF. TO 0-12) 3 MIN
1.20 DRAW ARROWS ON NO. LINES TO REP. SUBTR. FACTS (DIF. 0-12)
FRACTIONAL NUMBERS
1.23 IDENTIFY $\frac{1}{4}$ AND $\frac{1}{2}$ OF A REGION
MEASUREMENT
K.1 MEASURE ANY LINE TO THE NEAREST INCH
K.2 TIME TO THE NEAREST HOUR
K.3 CONVERT MONEY & MAKE CHANGE TO 10¢
1.24 COMPARE SHAPES AS TO LONGER, SHORTER, OR SAME

COUNT THE NUMBER OF ELEMENTS IN A SET TO 50
ADDITION
B.1 MISSING ADDENDS SUMS TO 12 (BASIC FACTS TO 12)
B.2 COLUMN ADDITION TO 12 (3 DIGITS)
B.3 TWO DIGIT ADDITION WITH NO CARRYING TO 99
I.11 WRITE THE SUMS FOR 30 REP. ADD. FACTS (0-12) 3 MIN TIME LI
I.13 DRAW ARROWS ON NUMBER LINES TO REP. ADD. FACTS (0-12)
SUBTRACTION
C.1 BASIC FACTS TO 12
C.2 TWO DIGIT SUBTRACTION - NO RENAMING DIF. TO 99
I.18 WRITE THE DIF. FOR 30 REP. SUBTR. FACTS (DIF. TO 0-12) MIN
I.20 DRAW ARROWS ON NO. LINES TO REP. SUBTR. FACTS (DIF. 0-12)
FRACTIONAL NUMBERS
I.23 IDENTIFY $\frac{1}{4}$ AND $\frac{1}{2}$ OF A REGION
MEASUREMENT
K.1 MEASURE ANY LINE TO THE NEAREST INCH
K.2 TIME TO THE NEAREST HOUR
K.3 CONVERT MONEY & MAKE CHANGE TO 10¢
I.24 COMPARE SHAPES AS TO LONGER, SHORTER, OR SAME
I.25 COMPARE SHAPES AS TO LONGEST, SHORTEST
I.26 MEASURE ANY LINE SEGMENT TO THE NEAREST $\frac{1}{2}$ INCH
IDENTIFY PENNY, NICKEL, AND DIME, AND THEIR VALUE
COMPARE THE VALUE OF PENNY, NICKEL, DIME USING $<$, $>$, OR $=$
GEOMETRY
IDENTIFY OBJECTS INSIDE, OUTSIDE, OR ON A CLOSED CURVE

E.C.E. & E.S.E.A. TITLE I EVALUATION MODEL OF THE O'FALLON CITY SCHOOL DISTRICT
DIAGNOSTIC PROFILE - MATHEMATICS
LEVELS K-3

LEVEL K 0 1 2	LEVEL 1 0 1 2	LEVEL 2 0 1 2	LEVEL 3 0 1 2
K.2 [illegible] IN A SET OF 10	1.2 [illegible] NUMBER OF ELEMENTS IN A SET OF 100	[illegible] OF ELEMENTS IN A SET OF 1000	K.2 WRITE NUMERALS [illegible] 100 AS EXPANDED FORM
K.3 COMPARE THE SIZE OF TWO NUMERALS TO TEN	1.3 PLACE VALUE TO 100	A.3 COMPARE THE SIZE OF TWO NUMERALS TO 1000	K.3 COMPARE THE SIZE OF ANY TWO NUMERALS USING <, >, OR = TO 9,999
0.01 CIRCLE THE NUMBERS OF A GIVEN SET 0-10	1.4 COMPARE THE SIZE OF TWO NUMERALS TO 100	A.4 WRITE NUMERALS TO 200 AND THE NUMERAL WHICH COMES NEXT	K.4 WRITE NUMERALS TO 9,999 AND THE NUMERAL WHICH COMES NEXT
0.04 IDENTIFY WHICH SET HAS [illegible]	1.5 WRITE THE NUMERAL WHICH COMES NEXT	A.05 WRITE ANY NUMERAL FROM 0-999 IN EXPANDED FORM	[illegible] OF NUMERALS OF A GIVEN SET 0-10
0.05 IDENTIFY WHICH SET HAS LESS (0-10)	[illegible] NUMERALS ORALLY 0-200 ALOUD	A.06 TELL THE PLACE VALUE OF ANY NUMERAL 0 TO 999	NUMERALS ORALLY [illegible]
0.06 IDENTIFY WHICH SET HAS THE MOST (0-10)	1.06 NAME THE PLACE VALUE OF ANY DIGIT IN ANY NUMERAL FROM 0-300	A.07 WRITE ANY NUMERAL FROM 0-999 IN EXPANDED FORM	3.01 GIVE PLACE VALUE OF ANY DIGIT [illegible] OF ANY NUMERAL 0-[illegible]
0.07 IDENTIFY WHICH SET HAS THE LEAST	1.07 WRITE ANY NUMERAL FROM 0-200 WHEN THE TEACHER NAMES NUMBERS ORALLY	A.08 WRITE THE NUMERAL THAT COMES NEXT 0 TO 999	3.02 WRITE NUMERALS IN EXPANDED FORM (0-99,999)
0.08 IDENTIFY WHICH SETS ARE EQUIVALENT	1.08 WRITE THE NUMERAL THAT COMES NEXT 0-200	A.09 COMPARE ANY NUMERALS 0 TO 999 USING <, >, OR =	3.03 WRITE THE NUMERAL THAT COMES NEXT (0-99,998)
1. COUNT NUMBERS 1-100	1.09 WRITE ANY NUMERAL FROM 0-200 IN EXPANDED FORM	A.10 COUNT BY TENS FROM 0-100 AND MULTIPLES OF TEN ONLY	3.04 COMPARE ANY NUMERALS FROM 0-99,999 USING <, >, AND =
2. WRITE NUMBERS 1-30	1.10 COMPARE ANY TWO NUMERALS FROM 0-200 USING <, >, OR =	A.11 START AT ANY GIVEN NUMERAL [illegible]	[illegible]
3. RECOGNIZE NUMBERS 1-30	COUNT THE NUMBER OF ELEMENTS IN A SET TO 50	[illegible]	3.13 WRITE THE SUMS OF 30 REPRESENTATIVE FACTS 2 MIN. TIME LIMIT
[illegible]	[illegible]	A.1 ADD C FACTS TO 18	3.15 ADD AT LEAST FOUR ADDENDS (COLUMN ADDITION) OF ONE DIGIT EACH
A.1 BASIC FACTS THRU FIVE, WITHOUT THE USE OF COUNTERS	[illegible] BASIC FACTS TO 12	A.2 ADD ONE TO THREE DIGITS, NO RENAMING	3.16 ADD ONE TO THREE DIGIT NUMERALS WITH RENAMING OF TEN ONES AS ONE TEN AND TEN TENS AS ONE HUNDRED
A.2 BASIC FACTS THRU FIVE, WITH THE USE OF COUNTERS	B.1 MISSING ADDENDS SUMS TO 12	A.3 COLUMN ADDITION TO 18	3.17 ADD DOLLARS, DIMES & PENNIES TO DEMONSTRATE UNDERSTANDING OF ADDITION WITH RENAMING
[illegible]	B.2 COLUMN ADD. TO 12 (2 DIGITS)	A.11 WRITE THE SUMS FOR 30 REPRESENTATIVE ADDITION FACTS (SUMS TO 18) 4 MIN. TIME LIMIT	[illegible]
C.1 SEPARATING SETS THRU FIVE, WITHOUT THE USE OF COUNTERS	B.3 TWO DIGIT ADDITION WITH NO CARRYING TO 99	A.13 ADD 1 TO 2 DIGIT NUMBERS WITH RENAMING OF 10 ONES AS ONE TEN	3.20 WRITE THE DIFFERENCES FOR 30 REPRESENTATIVE SUBTRACTION FACTS 2 MIN. TIME LIMIT
C.2 SEPARATING SETS THRU FIVE, WITH THE USE OF COUNTERS	1.11 WRITE THE SUMS FOR 30 REPRESENTATIVE ADDITION FACTS - SUMS (2-12) 3 MIN. TIME LIMIT	A.14 SOLVE NUMBER SENTENCES (SUMS TO 18)	3.22 SUBTRACT ONE TO THREE DIGIT NUMERALS WITH RENAMING
[illegible]	1.13 DRAW ARROWS ON NUMBER LINES TO REPRESENT ADDITION FACTS SUMS 0 TO 12	A.15 ADD DIMES AND PENNIES TO DEMONSTRATE UNDERSTANDING OF RENAMING	3.23 SUBTRACT DOLLARS, DIMES, AND PENNIES TO DEMONSTRATE UNDERSTANDING OF SUBTRACTION WITH RENAMING
D.12 IDENTIFY REGIONS THAT HAVE ½ SHADED	[illegible]	A.16 SOLVE WORD PROBLEMS USING ADDITION FACTS (SUMS TO 18)	3.24 SOLVE ONE STEP WORD PROBLEMS USING ADDITION AND SUBTRACTION INCLUDING RENAMING
[illegible]	[illegible]	[illegible]	[illegible]
IDENTIFY A CLOSED CURVE (SIMPLE CLOSED CURVE)	C.1 BASIC FACTS TO 12	C.1 BASIC FACTS TO 18	D.1 BASIC FACTS THROUGH 5 X 5 WITH INVERSES
IDENTIFY OBJECTS OUTSIDE A CLOSE	C.2 TWO / GIT SUBTRACTION - NO RENAMING DIFFERENCE TO 99	C.2 SUBTRACT ONE TO THREE DIGITS NO RENAMING	3.29 WRITE THE PRODUCTS FOR 30 REPRESENTATIVE MULTIPLICATION FACTS (0'S TO 9'S) 4 MIN. TIME LIMIT
[illegible]	1.18 WRITE THE DIFFERENCES FOR 30 REPRESENTATIVE SUBTRACTION FACTS (DIFFERENCES TO 0-12) 4 MIN. TIME LIMIT	A.18 WRITE THE DIFFERENCES FOR 30 REPRESENTATIVE SUBTRACTION FACTS (DIFFERENCES TO 18) 3 MIN. TIME LIMIT	3.30 MULTIPLY ONE TO THREE DIGIT NUMERALS BY ONE DIGIT MULTIPLIERS
IDENTIFY: 1. CIRCLES	1.20 DRAW ARROWS ON NUMBER LINES TO REPRESENT SUBTRACTION FACTS (DIFFERENCES 0-12)	A.21 SOLVE NUMBER SENTENCES USING SUBTRACTION	[illegible]
2. TRIANGLES	[illegible]	A.23 SUBTRACT 1 TO 2 DIGIT NUMBERS WITH RENAMING OF 1 TEN AS TEN ONES	E.1 ALL FACTS THROUGH 25 ÷ 5
3. RECTANGLES	FRACTIONAL NUMBERS	A.24 SOLVE WORD PROBLEMS USING SUBTRACTION FACTS (DIFFERENCES TO 18)	3.34 WRITE THE QUOTIENTS FOR 30 REPRESENTATIVE DIVISION FACTS (0'S TO 9'S) 4 MIN. TIME LIMIT
4. SQUARES	1.23 IDENTIFY ½ AND ¼ OF A REGION	A.25 SUBTRACT DIMES AND PENNIES AND RENAME ONE DIME AS 10 PENNIES	[illegible]
5. CIRCLE	[illegible]	[illegible]	IDENTIFY ANY INTEGER AS ODD OR EVEN
[illegible]	MEASUREMENT	MEASUREMENT	[illegible]
	E.1 MEASURE ANY LINE TO THE NEAREST INCH	D.1 BASIC FACTS THROUGH 2 X 10 WITH INVERSES	FRACTIONAL NUMBERS
	E.2 TIME TO THE NEAREST HOUR	[illegible]	G.1 NAME THE LARGER OR SMALLER OF TWO FRACTIONS TO EIGHTHS
	E.3 CONVERT MONEY AND MAKE CHANGE TO 10¢	FRACTIONAL NUMBERS	3.36 IDENTIFY ANY FRACTIONAL PART OF A SET (DENOMINATORS UP TO 8) LESS THAN OR EQUIVALENT TO 1
1.29 COMPARE SHAPES AS TO LONGER, SHORTER, OR SAME	1.25 COMPARE SHAPES AS TO LONGEST, SHORTEST	2.29 IDENTIFY ¼, ½, AND ¾ OF A REGION OR SET	3.37 IDENTIFY ANY FRACTIONAL PART ON A NUMBER LINE, (DENOMINATORS UP TO 8) LESS THAN OR EQUIVALENT TO 1
1.26 MEASURE ANY LINE SEGMENT TO THE NEAREST ½ INCH	1.26 MEASURE ANY LINE SEGMENT TO THE NEAREST ½ INCH	2.30 IDENTIFY 1/3, 2/3, OF A REGION OR SET	3.38 IDENTIFY EQUIVALENT FRACTIONS TO EIGHTHS
IDENTIFY PENNY, NICKEL, AND DIME, AND THEIR VALUE	IDENTIFY PENNY, NICKEL, AND DIME, AND THEIR VALUE	MEASUREMENT	MEASUREMENT
COMPARE THE VALUE OF PENNY, NICKEL, AND DIME USING <, >, OR =	COMPARE THE VALUE OF PENNY, NICKEL, AND DIME USING <, >, OR =	2.33 MEASURE ANY SEGMENT IN FEET AND INCHES	G.1A MEASURE ANY LINE TO THE NEAREST ½ INCH
GEOMETRY	GEOMETRY	2.34 US NO PENNIES, NICKELS AND DIMES, SHOW ANY AMOUNT OF MONEY UP TO 99¢	G.1B MASTER EQUIVALENT 3 FEET = 1 YARD
IDENTIFY OBJECTS INSIDE, OUTSIDE, OR ON A CLOSED CURVE	IDENTIFY OBJECTS INSIDE, OUTSIDE, OR ON A CLOSED CURVE	2.35 USING HALF DOLLARS, QUARTERS, DIMES, NICKELS AND PENNIES, SHOW ANY AMOUNT OF MONEY UP TO 99¢	[illegible]
		K.2 MEASURE CLOCK TIME TO HALF-HOUR	G.3A MASTER EQUIVALENTS: 7 DAYS = 1 WEEK, 24 HOURS = 1 DAY, 12 MONTHS = 1 YEAR
			G.3B COMPUTATION [illegible]



Teacher's Diagnostic Profile - Mathematics Level K-3 for monitoring skills taught to individual students.

THE PSYCHOLOGICAL CORPORATION
POLK AND GEARY, SAN FRANCISCO, CALIFORNIA 94109 (415) 771-3100

May 24, 1976

Mr. Kurtis Lile
Director of Federal Projects
Fremont Unified School District
40775 Fremont Boulevard
Fremont, California 94538

Dear Mr. Lile:

The Psychological Corporation, a subsidiary of Harcourt Brace Jovanovich, and the School of Education of the University of San Francisco are co-sponsering a special conference on the appropriateness, interpretation and use of standardized measurement instruments in California Public Schools. This conference will be held at the University of San Francisco in the Fall of 1976.

In order to prepare for this conference, we are inviting representatives of the major school districts in the Bay Area to meet with the Co-Sponsors to share their ideas and suggestions regarding the issues and problems that should be included in the program. Since those to be invited to the Fall conference will be educators of the public schools of California, we think it extremely important that representatives of the public Schools have a major part in developing the program for this conference.

A planning meeting has been scheduled for Monday, June 14th at 10:00Am at the Harcourt Brace Jovanovich building, Polk and Geary, San Francisco. If you plan to attend or will recommend another person from your district to attend in your place, please either write or phone me at your earliest convenience.

Sincerely,

Mr. James Botsko
Representative
Psychological Corporation

JB/gf

Harcourt Brace Jovanovich, Inc.

Harcourt Brace Jovanovich Bldg. • Polk & Geary
San Francisco, California 94109 • Telephone (415) 771-3600

September 15, 1975

Kurtis J. Lile
Director, Federal and State Projects
Fremont Unified
40775 Fremont Boulevard
Fremont, California 94538

Dear Kurt:

Thanks for the helpful advice and suggestions you gave me in planning our Bay Area workshop on tests and measurements to be held on October 29, 1975 in San Francisco.

Especially helpful were your suggestions regarding testing for Federal Title Programs and multi-cultural programs. This will be an especially important part of the workshop and your ideas will definitely be implemented in our planning.

Again thanks for your professional advice.

Sincerely,

Jim Botsko

Jim Botsko
Test Consultant

1975 SPECIAL PROJECTS

EVALUATION CONFERENCE

SPONSORS/SAN FRANCISCO UNIFIED SCHOOL DISTRI

HARCOURT BRACE JOVANOVICH
TEST DEPARTMENT

GOLDEN GATE HOLIDAY INN SAN FRANCISCO

OCTOBER 29, 1975

- Redwood Room -

8:30 - 9:00	REGISTRATION - coffee and Rolls
9:00 - 9:10	WELCOME Jim Botsko, Representative HBJ Test Department
9:10 - 10:00	GROUP ASSESSMENT WITH STANDARDIZED TE Dr. Bjorn Karlsen, Author, Educator. California State University, Sonoma
10:00 - 10:30	DISCUSSION
10:30 - 10:45	MORNING BREAK - coffee
10:45 - 11:30	EARLY CHILDHOOD EDUCATION Mrs. Barbara Wilson, Consultant, California State Department
11:30 - 12:15	CHANGES IN STATE REPORTING PROCEDURES Dr. Dale Carlson, Assistant Chief, Program Evaluation and Research California State Department
12:15 - 12:30	DISCUSSION
12:30 - 1:30	* LUNCHEON * Hosted By HBJ Test Department
1:30 - 2:30	BILINGUAL-BICULTURAL PROGRAMS Dr. John Vatsula, Evaluator, Placer County Schools
2:30 - 3:00	DISCUSSION

Adjournment

WILSON RILES
Superintendent of Public Instruction
and Director of Education

STATE OF CALIFORNIA
DEPARTMENT OF EDUCATION
STATE EDUCATION BUILDING, 721 CAPITOL MALL, SACRAMENTO 95814

May 13, 1976

Mr. Kurt Lile, Director
Federal and State Projects
Fremont Unified School District
40775 Fremont Boulevard
Fremont, CA 94538

Dear Kurt:

This letter is to confirm our meeting to discuss utilization of California Assessment Program information. We will meet on Tuesday, May 25, 1976, 9:30 a.m. at the Royal Inn at the San Francisco Airport. For those who are flying in, there is a free courtesy bus from the airport. For those who will be driving, the Royal Inn is located north of the airport and just north of the I-380 exit at 275 South Airport Boulevard.

The purpose of the meeting is to discover what networks exist in school districts through which assessment information flows, what barriers hinder dissemination and utilization, and what we can do to facilitate usage and communication. We have already started on some projects aimed in this direction and would like your reaction to these as well.

We should be through around 3:00 or 3:30 so you can make return plans. Please save your receipts so we can reimburse you for your expenses.

I look forward to a fruitful meeting.

Sincerely,

Bill Burson

William W. Burson, Consultant
Office of Program Evaluation
and Research
(916) 322-2200

CHAPTER

1 Overview
- Education is big business
- Public demands to know results obtained for tax dollar of innovative programs
- Assessment in other states and nationally
- California assessment dates back to 1961
- Test results are public information so decision is not *if* to share results but *how*.
- Who needs to know what results
- Summary of current publicity scheme

2 History of State Assessment in California
- Legislative intent
- Potential and documented uses (case studies) of CAP data

3 Who Gets What and When--Summary of documents produced by CAP and timetable for their distribution

4 Interpreting Test Results--similar to the present Guide to Interpretation

5 A Public Forum--Questions and Answers format on development, format, and content of the tests; administration procedures

6 Using CAP Results for Program Evaluation
- Procedures that can be and are being used at both district and school level. Case studies or generalized procedure

7 Reporting Test Results to the Local Board

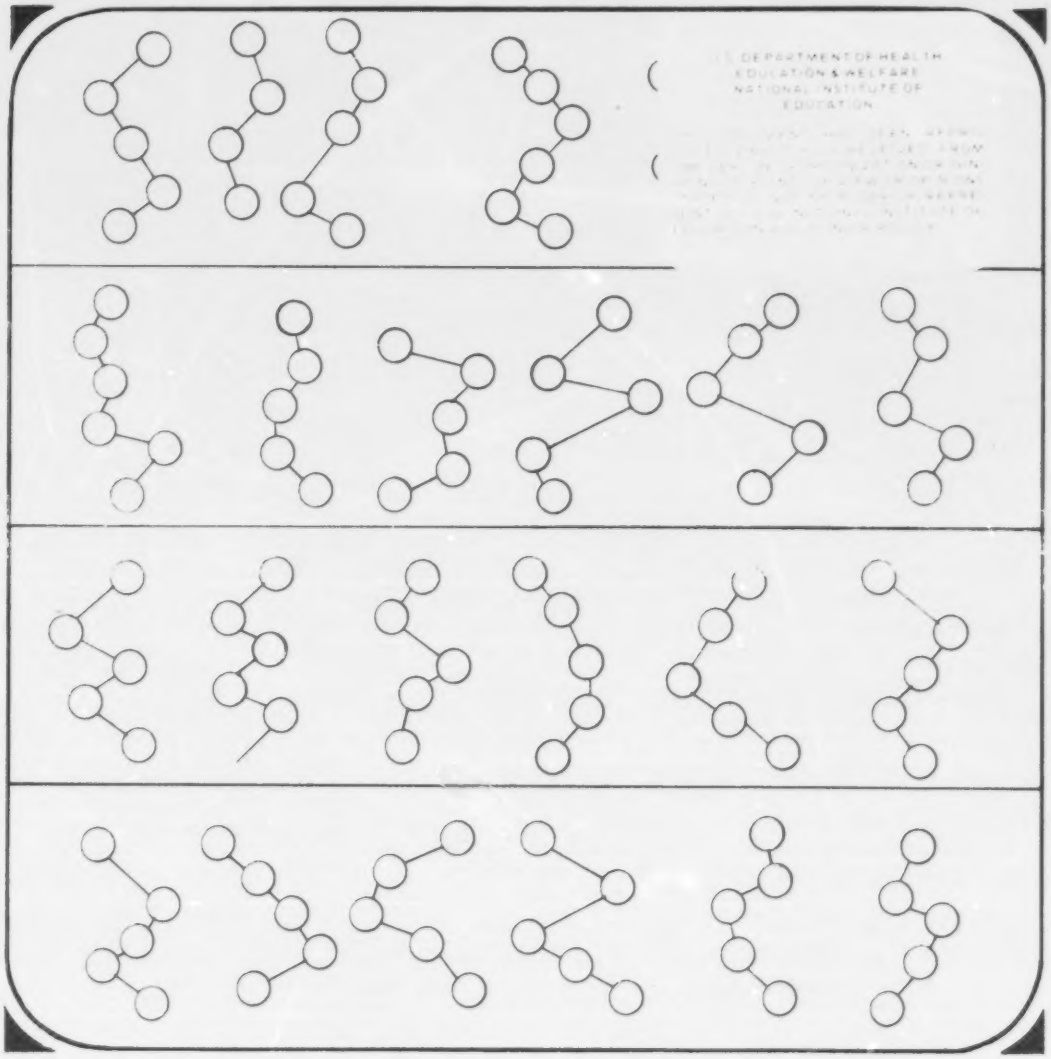
8 Working with the Media
- Press releases--do's and don't's
  - --sample
  - --common mistakes made in press
- Legal basis for availability to the public

9 Reports and Presentations to Other Audiences
- E.g.--parental advisory council, students

10 Bibliography
- CAP publications
- Other articles on how to use and publicize test scores

FREMONT UNIFIED SCHOOL DISTRICT

FEDERAL AND STATE PROJECTS OFFICE



TESTING HANDBOOK

IM006 481

PURPOSE OF THIS HANDBOOK

Each year more and more schools are designated as Federal and/or State Project schools through the advent of Early Childhood Education, E. S. E. A. Titl s I, IV-A, VII, and Preschool Education. Each program has certain testing and evaluation requirements. It is hoped that the materials and data found in this testing handbook enlightens and gives direction and the needed assistance to those school personnel designated as responsible for planning evaluation strategies for individual students, classes and school sites. It is further hoped that this handbook is only a beginning and that as needs change and program requirements are altered by new legislation it can be updated from input freely given by each of you as the need arises.

PREFACE

The testing program in Fremont Unified School District's Federal and State Project schools is a critical part of the total education process. While it is a requirement of those projects by the Federal or State Department of Education it provides local school sites with valuable information, when properly used, to effectively evaluate and plan programs at the local school site to meet specific needs of individual students.

Test results assist in identifying the successful basic skills programs in reading, writing and mathematics among those to be found in many schools in the district. They also assist in locating the children, classes and schools where greater effort and more effective instructional support is needed. It is important that where success is found, methods are disseminated and replicated. It is even more important that when success is not achieved in a program that we re-examine those programs and modify them to meet special needs.

Test results must be carefully used. Staff members are professionally obligated to use test scores to plan programs to further a student's education and not to label him/her as a low achiever or set low expectations for him/her.

One very important step that was highly recommended by the participants of the testing workshops on test interpretation was that a local site testing and evaluation committee be formed at each district school. Federal and State Project schools should assume responsibility for the quality of the schools program in group testing and coordinate their

testing efforts with other project schools. It was further recommended by the Title I program managers that a testing handbook be prepared to assist special program school site personnel in planning effectively for testing. This handbook is a result of that request.

A significant number of district teachers and administrators have participated in diagnostic workshops provided by the testing department over the past two years. We hope to continue these workshops as consultants remain available through test publishers.

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FREMONT UNIFIED SCHOOL DISTRICT
FEDERAL & STATE PROJECTS OFFICE

A. RECOMMENDATIONS FOR TESTING

The district's testing committee on group testing is composed of an elementary teacher, principals, counselor, and central office administrators. This fifteen member committee is charged with the responsibility to review district, state, and special project testing requirements; study tests used in Fremont; evaluate district policies and practices related to test administration and the use of test results; and to make recommendations regarding testing.

The committee met through the 1974-75 school year and solicited the observations and recommendations of teachers, counselors, and administrators. The final report, which included recommendations for implementation at the state, district, site, and classroom level, was recorded by the Director of Federal and State Projects. Additional comments were recorded from evaluations of participants of the testing workshops.

Below is a summary of the major recommendations of both the Committee On Group Testing and testing workshop participants. Copies of this report have been distributed to all Federal Projects schools. Additional copies are available upon request from the Federal and State Projects Office. School site evaluation committees are encouraged to become familiar with these recommendations.

1. The committee and workshop participants warned against exclusive reliance on any single test or test score for determination of

level or quality of instruction, or for indicating new procedures. Many evaluative devices are required and money is needed for acquiring them.

2. The committee and workshop participants asked that each school form a testing committee to assume responsibility for the quality of that school's program of group testing.

3. It was recommended that schools, teachers, parents, and students all be given a greater voice in determining the nature of the testing program and in deciding which students might be excused from testing.

4. The tests mandated by the state and by the district should be reviewed periodically to determine their content validity and congruence with the schools', special programs, and district's goals.

5. Teachers, counselors, and students all need better preparation for test administration and test interpretation. Help from consultants is required and is available from test publishers.

6. Test results should be put to better use. Test consultants are available and should be consulted as often as necessary.

B. SCHOOL SITE TESTING AND EVALUATION COMMITTEES

1. Each school involved in a Federal or State Project which requires special testing should have a testing committee to develop an annual group testing plan for their special program. Those programs which require special testing are listed below:

   a. Preschool

b. Early Childhood Education

c. ESEA Title I

d. ESEA Title VII

2. With the move toward restructuring early education to meet local school needs and individualization of instruction it is felt that each school should assume a leading role in developing a group testing program as one part of the total evaluation process to meet its own needs. This task is best accomplished by establishing a school-site testing committee composed of parents, teachers, and administrators. In secondary schools, counselors and students should also be included. Since these are working committees they should be relatively small, e.g., from six to eight members.

Annual Group Testing Plans

3. The school site testing committee has two principal tasks to be performed: the development of an annual group testing plan which will meet the specific needs of the school and which will conform to the required testing specified under federal, state, and district-wide programs. The following checklist includes the major areas which should be considered in the planning work of the committee.

Groups to be tested

Tests to be administered

Dates for administering the tests

Personnel responsible for administering the tests

Provisions for training personnel

Provisions for orientation and preparation of students

Guidelines for administering the tests

Provisions for the interpretation of test results to teachers, parents, upper-grade elementary and all secondary students as applicable in the bilingual program

4. The school site testing plans should be reviewed with the Early Childhood Education Consultant and the Director of Federal and State Projects. Group tests may be ordered through the Testing Department housed in the Federal and State Projects Office.

5. Following the development of the school's testing plans for the school year, the second principal task lies in the area of the follow through. The committee should:

   a. Oversee the implementation of the plans to assure that the key elements are, in fact, being realized.

   b. Evaluate the effectiveness of the program as implemented.

   c. Make necessary revisions in the plan as needs arise.

6. Consultant Assistance for School Testing and Evaluation Committee

Fremont Unified School District does not have a test consultant to work with individual school committees. Federal and State Projects schools must build the use of a test consultant into their budgets if it is felt that it is a necessary expenditure. Test publishers also have testing consultants available to assist in test interpretation. Arrargements can be made through

the Testing Department for publisher consultants. The district's Director of Reading is also available for assistance upon request.

C. TESTING SERVICES AND MATERIALS

1. Required and Optional Programs

State and District Requirements

The State testing requirements were changed with the passage of the Greene Bill, AB 665. State required testing consists of the matrix sampling testing in grades 2, 3, 6, and 12 and the readiness testing in grade 1, and physical performance test in grades 5, 7, and 10.

In addition to the State testing requirements, there are additional district adopted tests. These tests are recommended by the District K-12 Testing Committee composed of teachers, counselors, principals, and central office representatives. The Testing Committee meets yearly to review the needs of students, teachers, and the district. They also view the State testing programs and its implications in terms of feedback to students, teachers, and the district and then recommends additional district testing requirements if deemed necessary.

The schools' staff are informed of the State and district testing requirements by the Testing Department through bulletins and testing schedules distributed periodically.

Optional Testing

Another type of testing at the local site testing program

is optional in nature. While at some sites the state and district testing programs may comprise the complete testing program, there may be a need for additional testing at other sites. These tests are usually part of the locally designed school site evaluation plan.

Schools may participate in the Optional Testing program in two ways. At designated times during the year, optional test surveys with processing services are offered for certain tests. For different tests, or for tests administered at other times of the year, no processing services are provided. Participating in either, both or none of these, is optional to the site.

Required Testing for Selected Projects

A third type of testing is done for the evaluation of special projects. Whether these projects are federal or state funded, there are requirements for testing of pupils on a pre-post basis. Schools participating in such projects may be required to do testing beyond that required for state and district surveys.

State Required Tests

The state required test surveys are shown in Table I as follows:

TABLE I
State Required Tests

Grade	Date	Test
1	Testing to begin the 11th day of instruction.	Entry Level Test
2	April and May	Reading Test
3	April and May	Reading Test
6	April	Survey of Basic Skills
12	December	Survey of Basic Skills

EACH SCHOOL YEAR MULTIPLE COPIES OF THE CURRENT YEAR DISTRICT TESTING SCHEDULE ARE SENT TO EACH SCHOOL FOR TEACHER AND PRINCIPAL REFERENCE. PLEASE REFER TO THE SCHEDULE FOR SPECIFIC DATES AND TESTING REQUIREMENTS. IF YOU ARE UNABLE TO LOCATE A CURRENT SCHEDULE CONTACT YOUR BUILDING PRINCIPAL OR CALL THE FEDERAL AND STATE PROJECTS OFFICE.

Entry Level Test: Grade 1

The testing period begins on the 11th day of instruction and concludes on the 20th day of instruction. This schedule is designed by the State Department of Education to accommodate varying opening dates for the fall term. (Ten full testing days.)

Reading Test: Grades 2 and 3

The testing period in April and May includes a one week overlap with the sixth grade testing period. This schedule allows districts who wish to test all three elementary grades in the same week the opportunity to do so. It also is designed to accommodate the schedule of year-round schools as well as to provide flexibility for those districts testing in the spring for specially funded programs like ECE.

Survey of Basic Skills: Grade 6

The testing period is the last two weeks of April. This schedule should avoid any conflicts with spring vacation.

Survey of Basic Skills: Grade 12

The beginning date is the first Wednesday in December to avoid scheduling the test immediately after Thanksgiving vacation.

Physical Performance Test--Grades 5,7 and 10

The testing period for each year is during the months of March, April and May at the time which is best suited to the conditions of the learners, the units of instruction, and the weather prevalent in your location. Minimum testing according to California Administrative Code, Title 5, Section 1041, is for pupils ages 10 through 18 in grades 5, 7, and 10. The main purpose for the required measurement of physical performance is to help teachers identify his/her students' area(s) of weakness so that appropriate program modifications can be made in order to offer each student the instruction necessary for optimal development in the selected physical fitness components related to the six test items (i.e., leg power, abdominal strength, upper body, arm and shoulder strength, agility, and cardiorespiratory endurance.)

Direct Cost to Schools

The Testing Department will order standardized tests for schools at cost to the local school. In addition, a number of

scoring services and test sample materials are available but must be requested. Charges will be costed out so schools may earmark dollars in budget.

The Testing Department is not able to supply progress and diagnostic tests which accompany textbook series. These must be purchased out of local school project or regular school budgets.

Sample Tests

The Testing Department has a file of sample tests and manuals, many of which are single copies. These single copies cannot be sent to the schools, but can be examined in the office. If a particular group test appears to be promising for use locally, a sample set can be ordered from the publisher for the site. Tests ordered through the Testing Department are, of course, limited to standardized group tests. Tests to accompany particular textbooks or programs are bought out of the local site's instructional budget.

Each school should begin a testing file for future reference. Test samples and manuals should be kept in the file for interested teachers.

Order Tests in Advance

Principals are asked in May and June to determine with their staffs, their estimated needs for testing for the following school year. Monies for tests, answer sheets, and scoring service requested must be indicated in your school level project

budget. At sites where evaluation committees have been established, the committee could submit their estimates. Where the committees have not been established in spring or where there are many changes in the staff, pupils, or program the following fall, the May-June estimate may be revised as necessary in the fall. This should be done as soon as possible after school starts or tests may not be available on time unless in stock, which is unlikely.

When the estimates of needs for the following school year are received by the Testing Department they are compiled, and the stocks inventoried to determine how many more tests need to be ordered. Usually some stock beyond that reserved by the schools in spring is ordered during the summer. The time in transit ranges from 6 to 12 weeks depending on the availability of tests at the publishing houses and the distance from Fremont. The unreserved testing materials maintained by the Testing Department are available to schools which have not made advance orders. However, supplies are limited.

Reserves may be made at any time, but at least six weeks ahead of when the tests are needed. If the tests have not been reserved in advance, the school which requests the tests will receive them <u>if</u> there are tests available over and above those reserved. It may be necessary to order the tests from the publishers; this may cause a delay in the testing schedule at the site.

Ideally, the school site testing committee would plan in spring for the following year. They would reserve the tests they anticipate needing, and the Testing Department would order tests for them in the summer. In some cases, this testing order may need to be revised in the fall. Four weeks before the tests are needed at the site, a call to the Testing Department would start the process of locating the tests, packaging, and mailing them. The outline below indicates a recommended procedure.

TEST ORDERING PROCEDURE

May: School Evaluation Committee plans evaluation for following year. They list the tests and quantities needed on the "Estimate of Tests Needed" and return this list to the Testing Department.

June: The Testing Department orders the test from the publishers.

September: If necessary, schools revise their "Estimate of Tests Needed" and send their revised list to the Testing Department.

Two Weeks Before Testing: Schools call Testing Department to send out tests.

One Week Before Testing: The tests and manuals will be at the site so that on site teacher inservice sessions can be

conducted by the school principal or members of the local school site testing committee.

Allow Time for Delivery

A call to the Testing Department about two weeks before the tests are needed at the site will allow enough time for the test to be delivered on or before the desired dates for in-service. When tests are required in large quantities, the size of the packages precludes delivery through district mail. Time in transit for bulky packages is usually several days longer than through school mail.

2. Scoring, Processing and Reporting

After tests are administered, they are scored to determine the raw score, the number of correct answers. Since the raw score is often meaningless in itself, a conversion of the raw score into norm referenced scores such as percentiles or stanines is necessary. This conversion is part of the processing package. The raw and converted scores are often reported to the student and to the parents through prepared student profiles, to teachers through student labels and listings, and to community and district groups through publication of quartile scores.

(a) Scoring, processing and reporting by the Testing Department.

For district wide scheduled surveys at grades 4-12 whether optional or required, scoring, processing and

reporting are arranged by the Testing Department with an outside scoring service.

(b) Scoring, processing and reporting by the site.

When hand scorable tests such as those for the primary and elementary levels are administered, scoring, processing and reporting services are site responsibilities.

TABLE 2
Scoring, Processing and Reporting Responsibilities

GRADE	*SCORING	*PROCESSING	REPORTING
Grades 1-3 Scheduled Surveys	Site/Vendor	Testing Dept. and Site	Testing Dept. and Site
Grade 4 Scheduled Surveys	Site/Vendor	Testing Dept. and Site	Testing Dept. and Site
Grades 5-12 Scheduled Surveys	Site/Vendor	Testing Dept. and Site	Testing Dept. and Site
Primary and Elementary Tests (Write-in-book tests)	Site/Vendor	Testing Dept. and Site	Testing Dept. and Site
Elementary and Secondary Tests with Compatible Answer Sheets	Site/Vendor	Testing Dept. and Site	Testing Dept. and Site
Diagnostic Tests	Site	Site	Site

*Hand-scorable materials - Site
Machine scorable materials - Testing Department

Scoring

Just about every test published can be hand-scored. The

few tests which involve a number of categories to be scored and interpreted separately can only be scored by the publishers.

Hand Scoring

All group tests can be handscored. These tests are usually scored manually by classroom teachers and /or instructional aides when properly trained. The Testing Department can arrange for commercial scoring if machine scorable materials have been used. It is important that funds are budgeted for scoring, however, if the site does not intend to hand score. Check with the Testing Department in the Federal and State Projects Office for prices.

When tests are scored manually, there is a need for teachers to be accurate in scoring and tabulating test results. Specific test manual directions for scoring should always be followed exactly as printed.

Teachers usually find it easier to score page one in all booklets before going on to page two. It saves time since answers can be memorized as one goes through each page systematically in this fashion.

Teachers of intermediate grades often find it efficient, for certain kinds of tests, to team up with several teachers scoring while another teacher reads the appropriate answers.

Machine Scoring

Tests used at the primary levels provide for pupils

to write in the test booklet and tests used at the upper grade levels require the use of a test booklet and a separate answer sheet which is machine scorable. Generally, students at grade 4 and above are able to take machine scorable tests without being penalized by the additional steps required by this method. Machine scoring has been encouraged at these levels because this method offers the advantage of saving a considerable amount of teacher time and improved accuracy, as well as making it possible to provide counts of correct responses for each item for a few of the tests used.

Answer sheets must be those supplied by the publisher or those furnished by the Testing Dept. for a particular test. Number two pencils must be used in the appropriate areas. Extraneous marks, either in the body of the answer sheet, or on the margins, will lend to machine rejection of the answer sheet. The machine will also reject answer sheets which have been folded, torn at the edges, or smeared.

Identification on a cover sheet or on all the answer sheets if a cover sheet is missing, should include teacher, period, test, and the level and form of the test administered.

Machine scoring is expedited when materials are submitted in such a way so that they are ready for scoring;

i.e., they are facing the same way, have proper identification, have no extraneous marks, and are not mutilated in some way.

Processing

The number of items correctly answered by the pupil on a test usually provides insufficient information about his performance. The raw score needs to be converted to norm-referenced scores such as percentiles, grade placement scores, stanines, etc. This processing is done either by hand or by the computer.

Machine Processing

The district Testing Department arranges for machine scoring through an outside vendor for scheduled test surveys (see Table 2). Then the conversions are done by the Data Processing Center, the responsibility for the accuracy of the conversions rests with the Testing Department. The responsibility for the accuracy of the scoring for hand-scored tests lies with the site test and evaluation committee and building principal.

Hand Processing

When processing is done by hand, the responsibility for the accuracy of the conversion rests with the site. While converted grade equivalent scores are consistent regardless of the group tested or the time of the year the test was administered, percentiles and stanines depend on

the norm group used and the time of test administration. Conversion tables are usually found in the test examiner's manual. Other conversion tables are available from the Testing Dept.

Reporting Services

After tests are administered, scored and processed, the results are of interest to a number of people. The Superintendent, Associate Superintendent, Director of Federal & State Projects, Special Project directors, building principals, teachers, counselors, students, parents and the public.

Reporting by Computer

For scheduled test surveys, the output will include:

(a) Alphabetical student listings and result by class and grade.

(b) Gummed student labels.

(c) Student profiles (grades 4 and above) if requested, budgeted for and available.

(d) Interpretative sheet for use with student profiles.

(e) Frequency distributions for the schools.

(f) District listings of results (for state and district required surveys).

(g) Ascending list of students according to reading and math scores (secondary schools).

Reporting by Site

The site testing and evaluation committee will plan for reporting to parents, teachers and students for tests

which are not part of the state or district surveys.

3. Item Analysis

In response to teacher requests for assistance in using the results of district and special program required tests for diagnosing pupil subject area strengths and weaknesses, item response analysis workshops are scheduled by the Testing Department on a regular district-wide basis.

The test analysis and interpretation workshops include pupil response analysis for each test item and for subject categories. Class data includes response analyses for each item and for subject categories and comparisons with norm groups used in the standardization program. Test analysis techniques and the inservice on interpretation of test results provided at these workshops are valuable and are applicable to the classroom instructional program.

D. PLANNING FOR EVALUATION

Federal and State Project schools must plan for the type of evaluation which most fits their program.

Evaluation is an integral part of the instructional program. It enables both pupils and teachers to determine whether the intended instructional objective was accomplished. There are a variety of evaluation techniques, most of which are the informal techniques used many times daily within the classroom observation, discussion, short quiz, checking of papers, oral question and answer periods, demonstrations, use of examples and analogies, etc.

An additional technique is used much less frequently. Usually, once or twice a year (or perhaps in some cases not at all) students are administered some kind of standardized test. The proper use of standardized tests, both for individuals and groups requires an understanding of the content coverage, purposes, characteristics, and advantages and disadvantages of tests as well as the measurement problems to be considered when using these tests in "comparison." The various types of tests available are discussed below.

1. Norm Referenced (Standardized) Tests

   a. Basic characteristics - advantages

      (1) The test has diagnostic or predictive value. Since there is generally some correspondence between the small sample of behavior measured by the test and broader behavior or some other behavior or skill (validity), inferences about the corresponding behavior can be made. A spelling test which may consist of 20 words picked at random from the 1000 most frequently used words not only provides information about the child's knowledge of the 20 words used in the test but also about his probable knowledge of the other 980 words.

      (2) Although a standardized test may contain the same kind of items found in teacher-made tests, the content is general; it is based on objectives common to a great many schools and districts. It is not geared toward

a certain curricular approach or material. In reading, for example, students who have learned to read well, regardless of the particular technique or material used, should be able to perform well on a standardized reading test. The skill measured is the ability to read in general, not merely the ability to read textbooks published by any one company.

(3) The standardized test is an omnibus measure. The content is broad -- the questions sample skill in many areas rather than in a specific area. Whereas the teacher-made instrument may be designed to assess mastery of skills in dividing fractions for example, the standardized arithmetic achievement test may deal with the four operations involving both rational and irrational numbers.

(4) The test is written with the help of professional test writers, reviewers and editors, and professionals in the field. Pilot tryout of items and alternate forms of the test help eliminate ambiguous items.

(5) These tests provide an objective measure. The content, difficulty, scoring and interpretation of results are independent of the subjective judgement of the examiner. They are also independent of the particular biases and interests of specific teachers who may spend an inordinate amount of instructional effort on

a nonessential subskill. Reported data on reliability provides some assurance that individual performance at the particular testing time is indicative of his performance at other times provided not too much time, instruction or other factors have intervened.

(6) Norms are provided for these tests. These norms indicate the performance of various groups sharing characteristics similar to those of the tested group. The performance of these "norm" groups provide a benchmark against which the performance of an individual or group can be measured and from which inferences about the individual level of achievement can be made.

b. Cautions: Use and Limitations

(1) The greatest disadvantage of standardized tests is the misuse and abuse of the results by personnel who do not understand the purpose and uses of test results. The results themselves are but one indicator of pupil performance. A fifty item test can only sample the many skills necessary in reading. Thus, the test score is only one of the many sources of information available on pupil performance.

(2) Another problem has to do with the improper interpretation of any given test result. Since the

standard error of measurement applies to the scores of individuals, these scores should be interpreted, not as pinpointed, exact scores, but as scores indicating a range within which an individual's performance falls.

(3) Another area of misunderstanding is the grade placement or grade equivalent score. This score does not indicate a recommended instructional level, nor does it indicate the level at which the child would perform well in all areas.

c. Purposes for using Standardized Tests

Once these areas of misunderstanding are understood, there are ways in which standardized tests can be very useful. It is most useful in situations where comparisons are called for. Over a period of years, recorded test results together with other information will furnish a picture of each pupil's growth and progress. Do children in California do as well as children in Pennsylvania? How about the children in Alameda County compared to the children throughout the state? How about the effects of SRA materials? Would more funds to purchase a certain publisher's material be more economical and efficient in terms of reading achievement than funds for tutoring? Where are more expenditures necessary? These questions cannot be answered by using teacher-made instruments and

must rely on standardized tests.

2. Norm Referenced/Criterion Referenced Tests

The term "criterion-referenced test," often referred to by the abbreviation CRT, has a number of different definitions. All of the definitions, however, are similar in that CRT test's purpose is to determine whether certain criteria have been met. CRT and norm-referenced tests are not necessarily mutually exclusive. A standardized test with norm data is definitely "norm-referenced." To the extent, however, that the teacher uses that test to determine whether the students can perform at a given level, and that objective itself becomes the criterion, the norm-referenced test becomes a CRT. A CRT test intended to determine whether students have mastered the principles, concepts, and operations covered in a given chapter of a 6th grade math textbook is in a way a norm-referenced test. The writers and publishers intended that textbook for 6th graders, and they had a specific norm group in mind for which the textbook was written. Thus, both standardized tests and teacher-made tests can be norm-referenced and CRT instruments.

a. Basic Characteristics of Tests Specifically Referred to as Criterion-Referenced Tests.

(1) Testing of Specific Objectives

The objectives or criteria are spelled out specifically. Instead of measuring comprehension in reading, for example, a CRT objective may determine whether

the pupil has the ability to predict probable outcomes when presented with an incomplete story.

(2) The instrument is usually for a specific technique, program, or textbook. Since the criteria are not of the general variety which would be prevalent in across-the-board programs, the test is usually limited to those persons using the specific program or textbook.

(3) Generally, no normative data are provided. Since the intent of the CRT is to determine whether an individual meets the specific objectives, the only information usually resulting is a "yes-no" to show whether he has or has not met the criteria.

(4) The test has some diagnostic or predictive uses. Many of the CRTs are based on assumed hierarchies of skills. Since mastery of higher level skills is assumed to be dependent on mastery of lower level skills, testing at any level provides information about lower level skills and predictions of probable success on higher level tasks.

b. Sources of Criterion-Referenced Tests

It was earlier noted that standardized norm-referenced tests could be used as CRT measures. In addition, there are a number of commercially prepared CRT on the market which are advertised as applicable for general use

regardless of the particular program or technique used. Tests which accompany textbooks are criterion-referenced as are most teacher-made tests.

c. Cautions: Use and Limitations

(1) CRTs sample a small and specific segment of behavior and generalizations about larger and different segments of behavior cannot be made.

(2) CRTs intended for specific objectives or programs cannot be used to compare programs which do not have the same specific objectives.

(3) CRTs supply information about an individual or group's status, but no information about the individual or group relative to a norm group.

(4) Because CRTs tend to be specific, they often deal with sub-skills and processes assumed preliminary to the ultimate goal or objective. Thus, they are sometimes not "application" oriented.

FIGURE I

Differences in Norm-Referenced and Criterion-Referenced Tests

	Type of Test	
	Norm-Referenced	Criterion-Referenced
Content, scope and coverage	General, broad, content common to many districts, schools, programs, textbooks, etc.	Narrow, restricted; may pertain to specific textbooks, curricula, etc.
Types of item, tasks	Content not previously covered, and task of generalizing over new content or in new area.	Generally over content previously covered; or task previously encountered.
Standards/Norms	National population i.e., percentiles, stanines, predictive relative to norm group.	Individual or individual classroom centered, predictive relative to individual
Examples	Standardized Spelling Test	Spelling Textbook Test.

3. Type of (Publishers) Standardized Tests

There are many subject areas for which standardized tests have been developed. Regardless of subject matter content, however, there are certain commonalities in tests. The commonality of concern here has to do with the purpose or intent of the tests. The Testing Department presently has the following types of tests available:

a. Achievement Tests

These tests are designed to measure a pupil's educational growth and development of what he has learned.

The measurement of knowledge of basic facts (number combinations, geography concepts, history terms, etc.) is

the intent of some achievement tests. Other achievement tests attempt to measure understanding of principles and use of transferable or generalizable skills. Many achievement tests attempt to assess both the knowledge of basic facts, understanding of principles, and the use of certain skills. Among the scores available for achievement tests are: grade equivalent or grade placement scores, percentiles, accuracy ratios, rate or speed, age norms, standard scores, and stanine scores. A test series which consists of tests in several subject areas such as math, language, and reading is called a battery.

The tests can also be used as a predictor of future performance. A high scoring student has learned at an accelerated learning rate and will likely maintain that rate. A low scoring student, on the other hand, has learned at a slower rate and will thus probably fall behind his peer group.

b. Diagnostic Tests

Although the diagnostic test is a type of achievement test, there are differences. Generally, an achievement test tends to be a survey instrument, with only a few items to test achievement in each specific area. A diagnostic test covers content confined to specific skills or areas to discover the pupil's strengths and weaknesses in this more narrowly defined area. It attempts to assess

abilities in the subskills believed necessary for mastery of higher level skills. The resulting detailed analysis is to be used as a guide to remediate either the weakness itself or the cause of the weakness.

There are a number of problems associated with the use of diagnostic tests. As with any kind of test, most of the problems have to do with the misuse of results and wrong interpretations. The results of a diagnostic test apply to the individual; the comparison is not particularly with how Johnny compares with Mary, nor Reading I group with Reading II group, but with comparisons of the various skills and abilities of a single individual. Thus, results should not be used to compare individuals or groups, even when a grade equivalent score is given. They should especially not be used on a pre- and post-basis. If the results of a pre-test are used as intended as bases for remediation, the score on the post-test will merely indicate what the individual learned as a result of "attending or teaching to the test," and the score is not indicative of how the pupil achieves in the subject area in general.

Since diagnostic tests were not intended for comparison of individuals or groups, there is generally less reporting of reliability data by the publishers. Yet, reliability is more crucial to tests involving individuals

rather than groups of individuals. In addition, there are differing views of the hierarchies and structures of various subjects and skills.

The time and effort spent in examining and improving on subskills believed or assumed to be a prerequisite to the main objective has not been validated for many diagnostic tests.

Another problem has to do with the time consuming administration and scoring of tests. While a few diagnostic tests can be machine-scored by the publishers, the cost per test is high and the time involved is approximately 3-4 weeks because of the delay in mailing the tests to and from the scoring company.

The major problem, however, has to do with the expectancy that the use of these tests itself is a "solution." The results merely point out the areas that need attention: the teacher must decide how and where the areas can be improved. Diagnostic tests can be extremely useful only when teachers understand their purposes and their limitations.

c. Interest Inventories

These instruments are generally designed to discover both the range and intensity of an individual's interests. Some inventories compare an individual's interests with those of people successfully engaged in certain occupations.

These test results are useful to students, teachers, counselors, and parents if they are used as recommendations for career planning. These inventories are generally used at junior high school levels for career exploration units and secondary counseling purposes.

d. Aptitude/Specific Prognosis

Tests of this type are used to predict with varying probabilities the success one is likely to have in taking courses such as algebra or in attempting activities such as auto mechanics work. A reading readiness test is an example of a specific prognostic test. Since these tests are often limited to discovering skills believed prerequisite to the course or activity and do not consider personal characteristics such as perseverance, intensity or level of motivation or work study habits, the results of these tests should be used as recommendations, not as absolute barriers to enrollment in such courses. They can also be used as diagnostic tools to prepare students for an activity or a course.

e. Aptitude/General Prognosis

Performance on these tests is supposed to infer the academic or school related performance the examinee is capable of under satisfactory conditions; i.e., he is motivated and receives the proper instruction. Verbal aptitude tests are designed to measure capacity to perform

successfully in school tasks or to develop skills in subject areas which are heavily reliant on verbal competence. Nonverbal aptitude tests measure mental processes believed related to success in school through the use of pictures, diagrams, symbols, etc., rather than through the medium of the printed word. The problems with these tests are those shared by the other tests -- misuse of results and misperception of the nature of the scores and the tests. Since 1973, the state no longer requires IQ testing of pupils in grades 6 and 12. Group aptitude tests are available from the Testing Department in a limited number, for use by the school sites upon request. The local test and evaluation committees are cautioned, however, to carfully oversee the use of the test results and guard against improper interpretation of results. However, group aptitude testing is regulated by new legislation, please see Appendix A pertaining to Prohibition of Scholastic Aptitude Testing.

f. Test of Physical and Motor Skills

These tests, usually individually administered, often require formal training - if not for the administration of the test, for the interpretation of the score and to aid in making decisions regarding corrective instruction if necessary. As with any kind of measurement, the purpose is not to merely discover the problem areas but once

having uncovered an unsatisfactory condition, provide clues in techniques to correct it. Consultants and psychologists from the Special Education Department at the district office can administer and offer help on the use of these kinds of tests and placement of students with special needs.

g. Miscellaneous

There are many other categories of tests; among these are tests designed to measure level or range of creativity, attitudes or orientations, emotional or social adjustment, value systems, special abilities, etc. Since some of these tests require formal training to administer or interpret results, and since these tests are not general-purpose tests, careful consideration of the objective to be measured and the measurement instrument are essential. In many cases, the psychologists from the Special Education Department at the district office can offer the appropriate guidance.

4. Norms

When tests are scored, a raw score is produced. This score stands for the number of items an individual correctly answered on a test. On some tests, a correction formula for guessing by subtracting a percentage of the incorrect answers from the number of correct items is applied to derive a converted raw score. On teacher-made tests, a percentage correct score is often computed by dividing the number of items correct

by the number of items on the test. Raw scores and percentages, while very useful in the classroom situation, are of limited usefulness for standardized tests, and other derived or converted scores are necessary.

Converted scores have meaning in relation to a reference group. They indicate the pupil's standing relative to others in the norm group who were tested. If there are several subtests for which there are norms, intra-individual comparisons are possible. On a longitudinal basis it is possible by using converted scores on different levels of the same test series to determine how the individual is progressing relative to the norm group.

Norms provided by the publishers of standardized tests indicate the performance of students who were part of the standardization population. For meaningful norms, the norm group used for a test should be similar to that of the group being tested with that particular test. If for instance, the norm group was comprised only of middle class children in suburban areas, the norms would not be relevant for lower class inner city children. A norming population which included proportions of lower class, inner city children, and middle class children in suburbs equivalent to the proportions of these groups found in the general population would be relevant for both groups. Norms would then be interpreted as comparing individual performance against a general representative

population as second graders, first year students in algebra, etc.

a. Percentile Rank Scores

The percentile rank score for any raw score indicates the percentage of students in the norm group who scored at or below that particular raw score. Percentile rank scores range from 0-99. John's percentile score of 11, for instance, means that 11% of the students taking the same test nationally, scored at or below John's score. It also means that 88% of the national group had scores higher than John's. The raw score at the 25th percentile includes the score at or below which a quarter of the scores fall. Thus the score at the 25th percentile is called the Q1 score. The Q3 score is the score below which three-quarters of the scores fall. The Q2, or score at the 50th percentile, is also known as the median score. On achievement tests the scoring falling at the 50th percentile is usually the grade level score since by definition grade level is the midpoint at which half the students are above and half the students are below at any particular point in time.

Generally, the test is standardized for the time of year at which it was administered to the norm group. A test which was normed once in the fall and once in the spring would generally have two percentile tables. Teachers would use the fall norms for tests administered in

the fall. There are usually different percentiles for the grade levels. A raw score of ten, for example, obtained by a second grader in the fall would have a different percentile rank from the percentile rank for a fourth grader who took the very same test and got a raw score of ten.

Many test makers provide percentile ranks for groups which were not actually tested or for times of the year when no norming was done. For instance, if the test was normed in grade four in fall and spring, test publishers could also provide norms for winter even though no norming was done at that time. The publishers generally take the midpoint of the difference between ranks in fall and in spring for the ranks in winter. The winter norms are "interpolated" estimates of ranks students would have received had they taken the test in winter. Test publishers also often provide percentile ranks for grade levels which were not used in the norming sample. If the grade not tested is grade 3, and the tests were administered at grades 2 and 4, the midpoints of the difference are the interpolated percentile ranks for grade 3. An instance of "extrapolation" is when a test is normed only with grades 7-9 but where norms are also provided for grades 10-12. The percentile ranks were derived by estimating values beyond those actually observed on the basis of the achievement patterns found in grades 7-9.

Percentiles, as noted earlier, can be used to compare an individual's performance with those of a norm group, compare the performance of different groups, and to compare the intra-individual performance on different behavioral skills. Percentile scores are comparative; they have little meaning in themselves. A performance at the 80th percentile, for example, is not twice as "good" as the performance at the 40th percentile nor did the first student get twice as many correct items as the second student.

b. Stanines

Whereas percentiles range from 0-99, stanines range from 1-9. The norm population is divided into nine groups. These stanines represent ranges rather than exact pinpointed scores. The middle stanine, stanine 5, consists of the middle 20% of the distribution, stanines 4 and 6 both contain 17% of the group above and below the middle 20%, stanines 3 and 7 contain the next 12% of scores, stanine 2 and 8 contain the next 7% of scores, and stanines 1 and 9 contain the bottom and top 4% of the distribution. The following figure shows the distribution of percentages in each stanine.

FIGURE 2

Percentages found in each stanine

Stanine	1	2	3	4	5	6	7	8	9
Percentages in each stanine	4	7	12	17	20	17	12	7	4
Cumulative Percentile Ranks	0	4	11	33	40	60	77	89	96	100

Stanines are useful because they are bands within which differences are relatively insignificant; yet differences between bands are of significant difference. While most test publishers provide percentiles, only a few provide stanines.

c. Grade Equivalent Scores - (G.E. Scores)

Most achievement tests have grade norms; these may be called grade equivalent or grade placement scores. A grade placement score is derived by finding the middle score obtained by students of a particular grade. The median raw score obtained by fourth grade children in September would become the raw score identified as equivalent to a 4.0 grade score. The median raw score obtained in November would be the 4.2 G.E. score. The 4.1 G.E. score is interpolated; that is half of the difference between the raw scores of September and November would be assumed to be achieved in October. The assumption which is the basis for such interpolation is that academic growth occurs at regular and equal intervals. Although we know

this assumption is not true and that academic growth very often occurs in great spurts or is maintained at times at a plateau level, this is not a particular problem when standardization is adequate and is done several times during the school year. The problem occurs where standardization is done only once for a grade level. Thus the difference between the median raw score at 4.1 (grade four, first month) and 5.3 (grade five, third month) requires interpolation over 11 months. Interpolation is not the only problem. If a test has been administered to students at grades 4-6, grade equivalent scores below grade 4 and above grade 6 are extrapolated scores. From the pattern of achievement shown the students at grades 4 to 6 surmises about achievement of children in grades 1-3 and in grades 7-9 are made. Thus tests generally have both interpolated and extrapolated scores.

A grade equivalent (G.E.) score indicates a median score for a particular grade and month. A G.E. of 7.2 for Harry, a fourth grader, merely means that his particular raw score was the median score for seventh graders in November. It does not mean that Harry or any other fourth grade student with a G.E. of 7.2 would do particularly well in seventh grade or that they could do as well on other tests. However, on this particular test they did score at the median for seventh graders in November.

Because tests must be short enough to be practical for the students, the number of test items is often less than would be desirable. Thus at the extremes of the test, a small change in the number of test items answered correctly could result in great changes in grade equivalent scores. Students whose raw scores are equivalent to a grade equivalent score for their particular grade and month are considered to be at grade level. Thus in a third grade class tested in May, a student at 3.8 is at grade level, another at 3.6 is below grade level, and a third at 4.2 is above grade level.

In most classrooms, there will not be an exact division with half the students scoring above grade level and half the students scoring below grade level. However, in grades with a normal distribution corresponding to the national norm population, one could expect to find that approximately 50% of the students do score at or above grade level.

The grade level score is often mistakenly construed to mean an instructional level. While grade level scores can be one source of information to teachers, it is not intended to indicate the grade level of textbooks to be used in any subject. Great caution must be used in interpolating grade level scores to students and parents.

d. Month-for Month Gains

A very commonly state objective is for students to show a month's growth for a month of instruction. While this objective is reasonable for students achieving at grade level, it is not a reasonable objective for those considerably above or below grade level. Month-for-month gains by definition are based on grade placement scores which are in turn based on median achievement levels. Thus in a class with a distribution corresponding to the distribution of the standardization population, a reasonable expectation is for 50% of the students to show month-for-month gains or better. Students considerably below that level could be expected to make a lesser monthly gain.

5. Measurement Problems in Pre and Post Testing

Various school personnel have asked about the use of standardized group tests to evaluate the attainment of achievement objectives. They are reminded that group test results are only one of a number of ways in which achievement objectives can be measured. If group tests are to be used for this purpose, there are a number of factors to consider.

a. Problem: Comparing Scores from Different Tests

(1) Since test publishers use different procedures for selecting norm groups and vary greatly in reporting data on reliability and validity, converted scores on one test are not comparable to converted scores on another test.

(2) Use of the Same Form

The use of the same form for pre and post testing is recommended if there is a large enough interval between testing times. Because of the possibility of a "practice effect" if the same test is re-administered within a very short period, an interval of at least two months is recommended. Most projects requiring pre and post testing have a duration of over two months.

(3) Use of the Same Level

If the use of the same test or an alternate form is not advisable because of the long duration of the project and students will have progressed beyond the effective range of the pre-test, the next higher level of the test may be used. In most cases, the grade equivalent scores of the level are comparable and in others, a standard score can be used to compare results on different level tests.

b. Problem: Estimating Biases in Norms

(1) Empiric basepoints and interpolation

The procedures used by test publishers to derive grade placement and percentile scores have previously been discussed. The converted scores were shown to be either empiric and true or estimated and derived by interpolation or extrapolation.

Because converted scores are based on the assumption

that growth occurs in linear progression, scores for certain periods of the school year may be depressed and others may be inflated when compared to actual growth.

(2) Probable Biases and Controlling for them

Since the use of interpolated norms may lead to over or under-estimating actual performance, test users are urged to use tests at the time of the year when they were standardized. Thus tests standardized in May should be administered in May. If a pre-post comparison is needed at the school site and testing during the standardization months is not feasible, the bias inherent in interpolated norms can be controlled by post-testing at the same time of the year in which the pre-testing took place. Thus, if the pre-test was in fall, the post-test would logically take place the following fall. Since there would be problems in waiting until the students had entered the next grade level unless the classes remained with the same teacher, a better testing schedule for pre- and post-testing would be spring to spring.

While it must be admitted that pre-testing in the fall and post-testing in the spring has definite logistical advantages for teachers and administrators, the results may not reflect true gains for the students. Given the nature of interpolated norms which

assumed linear growth, students tested in the fall who score at the same level they scored at the previous spring, although they knew as much, or more than they had previously, would receive G.E. scores lower relative to grade placement at the time of testing than in spring. Overall scores may thus be artificially depressed in fall. When compared to a true G.E. score in spring, the students may show higher gains than would have been achieved by using a spring to spring schedule.

c. Problem: Errors in Measurement of Individual Gains

(1) Standard Error of Measurement

Often a raw score or a converted score, such as a grade equivalent score or a percentile score, is mistakenly perceived as an "absolute" measure of the individual. While test scores for groups of individuals are reliable indicators or group performance on a particular test, a test score for an individual's performance is much less reliable. The individual, had he taken the test again, or at some other time or in some other circumstance, could have had a different score. An individual test score should be interpreted as being within a range of possible scores, not as an exact pinpointed score. This range is known as the standard error of measurement and indicates the limits within which fluctuation is likely

to occur. (Hopefully, student profiles in the future would show not a score but the range of the standard error of measurement around the observed score.)

(2) Group Average Reliability

The standard error of measurement is not a problem when scores for large groups of individuals are examined. The disparities of true scores from observed scores are balanced for large groups - excesses and deficiencies cancel each other out.

(3) Group Gain Approach to Measuring Growth

If the site needs a growth picture, group data, rather than individual data, should be used.

Although there are a number of ways in which gains for a group can be computed, the most reliable method involves the use of medians. Problems of regression to the mean and standard errors of measurement can be minimized by computing gains for the medians rather than using individual data.

(4) Expected Gains

Another problem area has been expected gains of a year's academic growth for a year's instruction. If we had a school population that was achieving at the national average, we would expect 50% of our students to score at grade level. School populations scoring below national norms may have only 30% at grade level and higher than national norm populations may have

80% at grade level.

A year's growth for a year of instruction is based on the growth of students achieving at the national average. Since students who are achieving below national norms have achieved at a reduced rate, a year's instruction, if their rate of achievement is unchanged, will result in much less than a year's growth. The antithesis is true for above-average populations. Since their rates of growth are accelerated, a year's instruction should lead to much more than a year's growth in achievement.

d. Problem: "Chance" Level Performance

The incidences of children guessing blindly throughout the test are rare when teachers and proctors are alert and observant. Guessing generally begins at the point where the student is unable to cope with the items. If the student, after being urged to try a few more, appears to continue guessing, his answer sheet should be collected. The teacher or proctor then has the responsibility of noting in the student's test record (cumulative file - student profile) that he appeared to be guessing at the time of testing.

Test norms usually control for guessing by including enough items in the standardization process so that students guessing randomly throughout will score less than at grade level. The probability of students guessing at

random throughout and consequently scoring at grade level or above is small. The use of appropriate group data and techniques such as comparisons of median scores will lessen the impact of guessing since the errors will cancel each other out in large groups.

e. Problem: Ceiling Limit of Tests

The range of interest, abilities, and achievement orientations of pupils in any group may be relatively narrow or extremely wide depending on the diversity of the group. While the ideal situation would be to administer tests which are most appropriate for particular students (i.e., their scores would not fall at either extreme end), this is often not feasible because of the problems in administering and scoring the tests and reporting the test results, problems in interform and interlevel equivalence of tests, and the needs of the teacher, site, district, and state for comparative data.

For the student who is achieving at a very high level, however, the use of a group test which is appropriate to most members of his class may result in a score at or near the top.

There may, however, be situations in which teachers and principals are asked by parents about the gains for an individual student who previously scored near the top of the test. A student who got every item correct, or even missed one or two items, could be indicated by a 5.0+ (at

the top of the scale, 1 or 2 raw score points will change the converted score to what appears to be highly significant gains or losses.)

The problem here is that many parents do not understand this grade equivalent score. They may interpret a 5.0+ score as meaning that the child would do well were he to be instantly double-promoted to fifth grade. The 5.0+ is merely the publisher's estimate of how average fifth grade students would perform on the same test items. They do not claim the same for subskills not sampled on the test nor for subject areas not covered at all in the particular test.

Another feature of standardized tests not well understood is that grade equivalent scores are not intended to indicate instructional levels. Informal and teacher-made instruments are much better for determining the instructional level of the student or for grouping of students.

Consequently, a much better way to explain student performance to parents is to use percentile scores. These scores apply to the time of testing for a particular group. A raw score can be converted to a single grade equivalent score no matter when the test was administered, but the percentile scores will vary with time of year and grade when tested. Percentiles can be used to show parents how their children are achieving relative to other children tested at the same time. A student who scores at the 10th

percentile one year and moves to the 25th percentile is gaining on his group while a student at the 99th percentile both times is maintaining his "lead."

f. Problem: Choosing and Using the Best Statistical Approach

If a growth picture is desired, a simple comparison of pre and post-median scores is probably the easiest to compute, provides reliable information and avoids some of the problems encountered in the use of individual data or mean scores. The median pre-test G.E. score is subtracted from the median post-test G.E. score to determine the gain achieved in the pre- post-period.

g. Preparing and Submitting Optically Machine Scanned Answer Sheets

Since grades 4-12 answer sheets will be read by an optical scanner, care must be exercised in preparing them for scoring.

TEACHER CHECK

If teachers check each student's answer sheet on both sides for the following, much time will be saved on turn around and results will be more accurate.

1. Are all marks clear and black?
2. Are all erased answers clean?
3. Is the "Form of Test" marked correctly?
4. Is the student's name on each sheet; and is it properly marked for the machine to read?

5. Is the student number printed in the boxes at the top; and are the proper marks made in each column? Is the same number coded on all sheets, where multiple sheets are used?

   This one section is most crucial. Incorrect marks here will result in the student's score being lost during processing.

   Make certain that each student number is used only for one student and the same on all his/her sheets.

6. Gather all of the student's answer sheets together. The same side should be up in all cases. If more than one sheet is used, keep the sheets in separate piles.

   The clipped corners on each sheet are useful in completing this task.

   Do not bother to arrange them in alphabetical order. The computer can alphabetize thousands of student answer sheets in ten minutes.

   Do not use paper clips or rubber bands to secure sheets. Use envelopes only or paper bands.

7. Send the sheets to your principal or his/her designee.

PRINCIPAL CHECK

Each principal should check the same items that the teacher is asked to check. A careful editing at this time

will speed processing and insure that you will have all of the data for each student.

After editing the sheets, the Principal should:

1. Gather all sheets into a separate stack for each page.

   It is necessary to keep each teacher's sheets separate with a teacher header sheet on each stack.

   It is not necessary to alphabetize the sheets. the computer does this.

2. Each stack of sheets should be carefully placed in an envelope or paper band placed around it. Do not use rubber or elastic band or paper clips to hold the sheets together!

3. Send the envelopes containing the student answer sheets to the Testing Department.

The Testing Department will then edit each sheet for proper marks. We cannot check for duplicate students being assigned the same student number, nor will we be able to make certain that each individual student has the same number on each answer sheet.

Where coding marks are missing, we will insert them if the data is printed in the boxes as directed in the instructions. Where the date is not printed and marks are not coded, we will return those sheets to the school for hand scoring if time for clean up at the district office

does not permit clean up.

After this edit check the sheets will be mailed for processing.

Remember, the less editing that has to be done in the Testing Department the sooner your sheets can be processed and results returned to you.

h. Some Important Points to Remember About Testing

Read the entire Examiner's or Teacher's Manual carefully.

Ask the Principal or Testing Department questions about points that you do not understand.

Take the test yourself or . . .

Look at the test carefully. Read each question so that you know what the test is attempting to measure.

Make certain that tests are administered under the best possible conditions and with careful attention given to the Manual of Instructions. The best of tests will give erroneous results unless they are administered well and according to directions.

Relate test results to other kinds of information about students.

Remember that one test does not tell all there is to know about your students.

Look at all past test results and observational records of your students before you make a judgement.

Have faith in your own training and powers of

observation. You will discover some things about your student that no test will measure or you may discover data that will help you interpret test records more effectively.

Look carefully and critically at what a test claims to measure.

Become familiar with basic statistical procedures and results as they relate to the test you are administering.

Regard tests as one evaluation tool to help you fulfill your responsibility to your students.

Don't get up tight about tests -- evaluation -- statistics, they may be awesome at first, but will become useful and precise tools and will aid you in providing you with the needed information and will assist you in planning for individual needs of your students.

i. Marking Test Answer Sheets

Modern test scoring systems use optical scanning equipment to read student data. Optical scanning takes many forms, but for our test scoring services the optical scanning described here is used.

A light source is focused onto the test answer sheet. The light is reflected onto a photo cell. When a mark is present in a precisely marked spot, no light is reflected, and a mark is recorded on a

magnetic tape. This record is then processed to provide all of our test data output.

The position of the mark and its sequence on the page determines what is recorded and the sequence in which it is recorded on the tape.

Marks are the basis for all of our test scoring data. It is important that the test answer sheets are marked correctly. Teachers, when administering the tests, should follow the instructions closely. There are so many details to consider that they should not trust their memory when giving students instructions on filling out these sheets.

If student marks are to be read by the machine, they must meet certain requirements. These are determined by the machine and its mode of operation. Careful attention to these instructions will result in an accurate record of each child's performance on the test. Failure to meet these requirements gives us an inaccurate and incomplete record of pupil performance.

1. WHAT MAY BE USED FOR MARKING THE DOCUMENT?

   A standard number 2 pencil should be used. WHEN CARE IS EXERCISED, a 2½ or F pencil may also be used. They make marks sufficiently black and they can be readily erased. A number 3 pencil requires additional pressure to make the marks dark

enough. IBM ELECTROGRAPHIC and number 1 pencils are hard to erase and MUST not be used.

2. HOW ARE THE MARKS READ?

Marks are read by contrasts in light reflection. A high light reflection indicates no mark. The absence of light reflection indicates a mark. Because the marks are not read by electrical conduction through the mark, IBM ELECTROGRAPHIC pencils are not required and MUST not be used.

3. WHAT KIND OF MARKS ARE REQUIRED FOR MACHINE READING?

Marks should be dark and should cover the full width and length of the marking position. Practically, the marks should fill at least two-thirds of the vertical width of the mark position. A line too thin or too light will not be read by the scanner.

4. CAN A MARK BE ERASED?

Yes. Care must be taken to make a CLEAN ERASURE. Otherwise, incomplete erasures or smudges might be read as a mark by the machine.

5. CAN A MARK STRAY OUTSIDE THE MARK POSITION GUIDE LINES?

Yes, with limitations. Two-thirds of the vertical width of the mark position must be covered and no mark should extend more than 1/6" beyond the ends of the mark position guide lines. There is one

exception to this rule. THE MARK POSITION NEXT TO THE TIMING MARKS MUST NOT BE MARKED BEYOND THE RIGHT END OF THE GUIDE LINES.

GLOSSARY OF TERMS

ACHIEVEMENT TEST
A test which measures how much a pupil has learned in a given field.

ANALYSIS OF COVARIANCE
A statistical analysis which includes pretest measures used to adjust post-test scores prior to an analysis of variance; the covariates are used to equate groups statistically.

ANALYSIS OF VARIANCE
A statistical comparison between means to determine whether observed differences could be attributed to chance.

BATTERY
A group of several sub-tests whose results have meaning by interpreting them singly, in combination, or totally.

CEILING
Highest level of ability which can be measured with a test. When the ceiling of a test has been reached by a pupil, the next higher level of the test should be administered to obtain a more accurate picture of his actual abilities.

CHI-SQUARE
A statistical technique used to compare observed and expected frequencies in order to determine whether they differ significantly; or to compare a frequency placed in a contingency table (2 x 2, 2 x 3, etc.)

CHRONOLOGICAL AGE
Actual age in months or years and months at the time the child took the test.

CONFIDENCE INTERVAL
A band associated with a measure about which a probability statement can be made. 95% confidence interval gives the limits within which we can be 95% confident that the true score is to be found.

CUMULATIVE FREQUENCY POLYGON
A "line graph" with the ordinate (Y axis) comprised of the cumulative frequency (cf); points are plotted directly over the upper real limits.

FACTOR ANALYSIS
A statistical technique used to reduce a large number of variables to a smaller set of factors.

FREQUENCY
The number of times the phenomenon occurred or was present.

FREQUENCY DISTRIBUTION
A tabulation showing the frequencies of values of a variable when these values are arranged in order of magnitude.
UNGROUPED: score interval of one
GROUPED: score interval of more than one - three, four, five, etc.

FREQUENCY POLYGON

A "line graph" with points plotted above the midpoints of each class interval.

GRADE EQUIVALENT OR PLACEMENT

A ranking developed to indicate approximate level of achievement characteristics of school grade. For example, a grade placement score of 5.6 indicates that on that particular test, the child has scored on that test at the level of the average student in the sixth month of the fifth grade.

HISTOGRAM

A "bar graph" with real limits used for bar width.

HYPOTHESIS TEST

A conclusion concerning a null hypothesis

NULL HYPOTHESIS: An hypothesis which states that no difference exists between a sample statistic and a population value or between two (or more) sample statistics.

INTERACTION

The relationship between the measures of variables for two or more groups in a statistical analysis with two or more variations in the variable(s) and/or groups.

ITEM ANALYSIS

A review of the items in an instrument which analyzes three components:

1. Item difficulty
2. Item discrimination
3. Effectiveness of distractors

MAIN EFFECT

The relationship between the measures of a variable for two or more groups in a statistical analysis.

MEAN

Total of a number of scores divided by number of scores present. Another term for mean is "average."

MEDIAN OR QUARTILE 2 (Q2)

Middle score in a set of scores. It is the point above and below which 50% of the scores fall.

MODE

The most frequently occurring value or number in a frequency distribution. If the frequency distribution is displayed graphically, the mode is the score corresponding to the highest point on the curve.

MULTIPLE CORRELATION COEFFICIENT

R, the coefficient which provides a measure of the relationship of one dependent variable with two or more independent variables.

MULTIPLE REGRESSION

A general statistical technique by which one can analyze the relationship between a dependent or criterion variable and a set of independent or predictor variables.

EQUATION: statement of the relationship of the dependent and independent variables.

$$Y = A + B_1X_1 + B_2X_2 + \ldots\ldots$$

NORM-REFERENCED TEST

A measure which indicates a student's relative standing along the continuum of attainment. A test which compares a student's achievement with a population of similar students.

NORMS

A set of standards to which a test score may be compared. Norms are typically reported in the forms of grade, age, standard scores, and percentiles.

PEARSON CORRELATION COEFFICIENT

R, a measure of the relationship between the numerical values of two variables.

PERCENTILE

One of the 99 scores that divides a distribution of scores into 100 equal parts. A percentile rank is an individual's rank in a group of 100 representative persons in a normative population. An individual's percentile rank of 40 indicates that in relation to the group with whom he is being compared, he has surpassed the performance of 40% of the group and 60% of the group has obtained superior scores.

PERFORMANCE OBJECTIVE

A performance objective is a statement that specifies the expected or desirable learner outcome as a result of a specific instructional program or treatment.

POPULATION

The total group which is of interest or concern; as commonly used in testing, the totality about which statistical inferences are to be made and from which a sample is taken. The total group being considered.

RANGE

The smallest interval on the score scale that will include all the measures in the distribution. For example, if 98 is the highest score and 10 is the lowest, then the range is between 10 and 98.

READINESS TEST

A test of ability needed to begin a new type of learning. Ability, experience, and maturity are important factors in any test of this type. Reading readiness tests in the early school grades are the most common type of readiness tests given.

RELIABILITY

Degree to which a student would obtain the same score on a test if conditions for the second testing could be assumed to be identical to those of the first testing session.

SAMPLE

A systematic selection of a limited number of observations, individuals or cases to represent a particular universe.

SCATTER-DIAGRAM

A plot of scores, a graphic representation of a correlation.

SEMI-INTERQUARTILE RANGE

$Q = \frac{Q_3 - Q_1}{2}$; a measure of range.

SPEARMAN CORRELATION COEFFICIENT

A measure of the relationship between two sets of ranks.

STANDARD DEVIATION

A statistical concept used to measure range or dispersion of scores from the mean. Sixty-eight per cent of all scores fall within one standard deviation in either side of the mean; 95% fall within two standard deviations from the mean.

STANDARD ERROR OF ESTIMATE

A measure of variability in predicting Y values from X values; for any given value of X the chances are two out of three that the observed case will fall within a band (in which is the predicted value of Y) $\pm$ 1 standard error units wide.

STANDARD ERROR OF MEASUREMENT

This indicates the range in which an individual's "true" scores would fall based upon the score obtained in the test. Assuming a standard error of 2 and an obtained score of 40, this tells us that if it were possible to administer the test 100 times under the identical conditions of the first examination, the probability is that scores ranging from 38 to 42 would occur on 68 occasions; that scores ranging from 36 to 44 would occur on 95 occasions. The standard error of a test can usually be found in the test manual.

STANDARD SCORES

A converted score with a mean of 0, a standard deviation of $\pm$ 1.

STANINE

A unit of a standard score scale that divides the norm population into nine groups. The word "stanine" draws its name from the fact that it is a STAndard score on a scale of NINE. (STANINE) A stanine scale is based on a scale which has a mean of "5" and a standard deviation of "2".

SURVEY TEST

A test measuring specific abilities or achievement, which is administered to a wide distribution of pupils. Thus, a test administered to all ninth graders in the city of Oakland would be a survey test.

T-SCORES

A standard score with a mean of 50 and a standard deviation of 10.

T-TEST

A statistical test to compare two means to determine whether observed differences could be attributed to chance.

VALIDITY

The degree to which a test measures what it purports to measure or the extent to which a test does the job for which it is intended.

CONTENT VALIDITY: Refers to how well the content of the test samples the subject matter or situation about which conclusions are to be drawn. Content validity is especially important in an achievement test.

VALIDITY (cont.)

PREDICTIVE VALIDITY: Refers to the accuracy with which an instrument indicates a future event.

CONSTRUCT VALIDITY: The extent to which a test measures some relatively abstract psychological trait or construct.

VARIANCE

The degree of dispersion about the mean of a set of observations or measures. The degree of variance is the square of the standard deviation. Analysis of variance is the study of the meaning or significance of the dispersion.

WILSON RILES
Superintendent of Public Instruction
and Director of Education

APPENDIX A

STATE OF CALIFORNIA
DEPARTMENT OF EDUCATION
STATE EDUCATION BUILDING, 721 CAPITOL MALL, SACRAMENTO 95814

February 4, 1976

TO: District and County Superintendents of Schools
ATTENTION: Director of Testing

FROM: Alexander I. Law, Chief
Office of Program Evaluation and Research

SUBJECT: Implementation of Legislation Pertaining to Prohibition of Scholastic Aptitude Testing

Assembly Bill 283 by Assemblyman Willie Brown (Chapter 460, Statutes of 1975) prohibits the administration of all group "scholastic aptitude tests" in the public schools except for specified purposes. This law became effective on January 1, 1976. It does not affect any current achievement testing for categorical program evaluation or the state assessment program. This memo provides information and guidance on implementation of that law. A copy of the bill is attached for your information.

General Information

There are only three general exceptions to the prohibition. Briefly, they are as follows:

1. Testing for placement in special programs for the mentally gifted;

2. Testing for determination of post-secondary scholarship awards and grants; and

3. Testing as part of a specific research project.

More information about the first and third purposes is given later in this memo. The second is self-explanatory.

Types of Tests Prohibited

Education Code Section 12821.5 refers to any test which "provides or attempts to provide a single measure of general scholastic aptitude ...." Questions have been raised about the meaning of the word "single." A request for interpretation by Legislative Counsel led to the following opinion:

(1) A standardized group test which yields two or three scores, such as a verbal score and a quantitative or non-verbal score, as well as a total or combined score, where such total or combined score is intended to be, or is treated as a single measure of a pupil's general scholastic aptitude, comes within the scope of the prohibition of Section 12821.5.

(2) A standardized group test which yields an array of scores, such as verbal, numerical, spatial, abstract reasoning, mechanical reasoning, etc., but for which no overall total or average score is reported, is not within the scope of the prohibition of Section 12821.5."

According to this opinion, the law clearly prohibits the use of a test which yields only one score, or a total or average score, as well as the practice of giving only one portion of a test having several parts measuring different traits. The opinion does not focus directly on the use of a test which yields only two scores, e.g., verbal and quantitative, which are not intended to be combined or averaged. It is our position that such tests are within the scope of the law and therefore should be considered prohibited. As an example, districts are now prohibited from using the test previously required under the old state testing program, the Lorge-Thorndike Intelligence Test.

In summary, the following practices are no longer permissible:

1. Administering any group scholastic aptitude test which, (a) has only one or two parts or sub-scores, or (b) yields an average or total score.

2. Administering only one or two parts of a test which consists of several parts or sections.

Testing of Mentally Gifted Minors

Group scholastic aptitude tests may be administered for determining placement in a special education program for mentally gifted minors in accordance with other statutes (Education Code Sections 6421 and 6422) and regulations (California Administrative Code, Title 5, Education: Sections 3800, 3820 and 3821). In most cases such tests are used as screening devices to identify pupils for further study and additional testing with individual intelligence tests. Districts which follow the practice of mass screening with group tests will be asked to justify their methods on forms to be supplied by the Gifted and Talented Education Management Team.

In either case, the scores are to be destroyed for all pupils who did not qualify for additional study or who were not selected to participate in the program. They are not to be entered in cumulative record folders, even on a temporary basis, nor are they to be shown to students, classroom teachers, or any other school personnel not responsible for the selection of pupils for the program.

Research Use of Group Aptitude Tests

The legislation states that group scholastic aptitude tests may be administered for research purposes, provided that the district administering them has a testing plan approved by the Superintendent of Public Instruction. The plan must include:

1. **A current schedule of testing;**

2. **A statement of the purposes of the uses of the tests; and**

3. **Provisions that such tests are administered and the results interpreted under the direct supervision of a qualified school psychologist, psychometrist, or school counselor.**

Since the clear purpose of this law is to remove virtually all group aptitude testing from the public schools, research will be defined in a rather limited and rigorous fashion along traditional, classical lines. Although often called "research," the types of projects and studies carried out by most districts probably would not qualify as research for purposes of this law. The primary, if not the only, legitimate uses of scholastic aptitude test scores in this research capacity are to serve (1) as a basis for selecting students to participate in a research study and (2) as a basis for statistically controlling for the effects of differences in scholastic aptitude where students were not selected on this basis. Even then, other variables, such as socioeconomic status or achievement level, can usually be substituted for scholastic aptitude scores with satisfactory or superior results. No plan will be approved if, without placing severe limitations on the interpretation or usefulness of the findings, some other variable could be used in place of scholastic aptitude scores.

The routine evaluation of an ongoing instructional program or of a specially funded program would not qualify as a research effort, unless a specific research project happened to overlap with such a program. Similarly, the administration of a scholastic aptitude test to set an expected achievement level for a student or group of students would also fail to qualify as a research use, unless this procedure happened to be a part of a larger research design.

It is advisable to contact this office during the early stages of planning a study in order to obtain additional information and a set of guidelines and criteria for an approved research testing plan. Consultants assigned to assist you in implementing this law can be reached at (916) 322-2200.

CHAPTER 460

An act to add Section 12821.5 to the Education Code, relating to public schools.

[Approved by Governor August 29, 1975. Filed with Secretary of State August 30, 1975.]

LEGISLATIVE COUNSEL'S DIGEST

AB 283, Brown. Schools: scholastic aptitude tests.

Existing statutes require statewide testing by achievement tests in basic skills courses and content courses and by physical performance tests and authorize governing boards of school districts to administer other tests. Existing statutes also require the administration of tests for evaluating accelerated instructional programs in mathematics and, in grades 1, 2, and 3, of certain reading tests.

Existing statutes also specify that tests measuring intellectual ability and aptitude may be a source of evidence for determining general intellectual ability for purposes of the special educational programs for mentally gifted minors.

Existing statutes also prohibit giving any group intelligence quotient test, except intelligence tests administered on an individual basis for purposes of placement in special education programs, to any public elementary or secondary pupil who has come to the United States for the first time from a foreign country in which English is not the primary language until such student has resided in the United States for two years.

This bill adds provisions which would:

(1) Prohibit school districts from administering, in connection with the statewide testing program or otherwise, any standardized group tests which provides or attempts to provide a single measure of general scholastic aptitude of pupils; and

(2) Permit the administering of such tests by school districts for purpose of placement in special educational programs for mentally gifted minors or in postsecondary education and for determination of pupil eligibility for specified awards relating to postsecondary education; and

(3) Authorize school districts, with prior approval of Superintendent of Public Instruction, to administer group scholastic aptitude tests for research purposes if the district has a superintendent approved group testing plan which includes specified elements.

The people of the State of California do enact as follows:

SECTION 1. Section 12821.5 is added to the Education Code, to read:

12821.5. No school district shall administer, in connection with the statewide testing program, or otherwise, any standardized group test which provides or attempts to provide a single measure of general scholastic aptitude of a pupil, to any pupil or group of pupils in the district, except:

(a) A school district may administer or allow to be administered scholastic aptitude tests for placement in special educational programs for mentally gifted minors provided pursuant to Article 1 (commencing with Section 6421) of Chapter 6 of Division 6 of a postsecondary education or for the purpose of determining eligibility of students for scholarship awards, grants, or other awards relating to postsecondary education.

(b) A school district, with the prior approval of the Superintendent of Public Instruction, may administer group scholastic aptitude tests for research purposes, provided that the district has a Superintendent of Public Instruction approved group testing plan which includes:

(1) A current schedule of testing;

(2) A statement of purposes of the uses of the tests; and

(3) Provisions that such tests are administered and the results interpreted under the direct supervision of a qualified school psychologist, psychometrist, or school counselor.

APPENDIX B

FREQUENCY DISTRIBUTION

INSTRUMENT TITLE: _____

DATE ADMINISTERED: _____ TYPE OF SCORE: _____ GROUP: _____

X	TALLIES	f	cf

Appendix J

FREMONT UNIFIED SCHOOL DISTRICT

DISTRICT-WIDE TEST COMMITTEE

MINUTES

The District-Wide Test Committee met on October 15, 1974. Those in attendance were:

Paul Bonaccorsi
Doug Carr
Bob Lewis
Kurt Lile
Tom Lord
Vance Nelson
Walt O'Neill
John Peacock
Roy Piper

STATE MANDATED TESTING - GRADES 6 and 12 - Mr. Lile has received information from the State Department regarding grades 6 and 12 testing for the 1974-75 school year. Reading, math, spelling and language will be given at both grades and administration time will be approximately 40 minutes. Pupil information section will have to be completed as for the first, second and third grades. It was also recommended that test administrators review instructions before tests are administered.

DUE DATES FOR GRADES 1 through 6 TESTING - All grades 1 through 6 answer documents are due in the Federal Projects Office on October 22nd. Grades 7 through 12 are due on October 31st. If the junior high and senior high people can get their answer documents in early, we can send the documents off to the scoring service all at one time and will try to do it by the 31st.

ADDITIONAL MONIES FOR BUDGET - Mr. Lile informed the Committee that no additional monies was available for testing. The MGM Program will contribute $2,000.00 but other than that, we are 'bound' to the monies left in our present budget. The Committee agreed that we would have to go along with this and order scoring service that would benefit all and cut out whatever we did not have monies for as previously agreed upon.

OTHER BUSINESS - The question of why we held the Committee Meetings at 9:00 AM arose, and a suggested time of 1:00 PM was submitted. A vote was taken and the 9:00 AM time will remain as the meeting time.

It was suggested for the 1974-76 budget that we itemize all of the items wanted or needed and submit that to the Board instead of 'lumping' it altogether in one sum. We have always costed out our budget by item but reported it as a 'lump' since this is all the forms will allow.

NEXT COMMITTEE MEETING WILL BE HELD ON NOVEMBER 19, AT 9:00 AM in the STAGE CONFERENCE ROOM.

FREMONT UNIFIED SCHOOL DISTRICT

DISTRICT-WIDE TEST COMMITTEE

MINUTES

The District-Wide Test Committee meeting met on November 19, 1974. Those in attendance were:

Paul Bonaccorsi
Loren Coburn
Phil Holmes
Bob Lewis
Kurt Lile
Tom Lord
Gary Morse
Vance Nelson
Roy Piper

STANFORD ACHIEVEMENT TEST RESULTS - GRADES 1 THROUGH 12 - Mr. Paul Kullman, Harcourt Brace Jovanovich representative attended the meeting to inform the committee of the arrangements that were made to send answer documents to the scoring service. The documents were picked up at our warehouse on October 31, 1:30 PM by Nova Truck Line and delivered to the San Francisco airport for air shipment to Cedar Rapids, Iowa. The truck line sent them to Chicago and then were sent by truck freight to Iowa City on November 4. The shipment arrived in Iowa City at the scoring service on November 14. The scoring service began processing the answer documents immediately. The reason given by the truck line for taking to Chicago and back to Iowa City was that they would be saving the company money, even though this was not the wishes of Harcourt Brace Jovanovich. At this time, the test results reportedly are to be received in San Francisco on November 21st and will be hand delivered to us the same day for processing and delivering to the schools on the 22nd if in fact they meet their projected schedule.

Vance Nelson made a recommendation that we ask Harcourt Brace Jovanovich to return all of the answer documents for grades 9 through 12 for our inspection after being informed that the scoring service had found 1 to 6 digits marked on the timing section of each answer sheet. Paul Bonaccorsi seconded the motion which passed by unanimous vote. Harcourt was contacted and has agreed to return the answer documents at their expense.

SECOND AND THIRD GRADE STATE TESTING (1973-74) - Roy Piper discussed the California Assessment Program report on the second and third grade reading test. This report will be in the hands of the Elementary Principals this week. The report includes Reading test results for the State Matrix Test given in the Spring of 1974. The areas reported include the following: 1. Mean test score 2. Reading test comparisons (State percentil rank) 3. The interpretation index 4. Background factor summary and 5. Test Results by content area

Each principal should receive the Basic Objectives for California State Reading Tests for Grades 2, 3, 6 and 12 to help interpret the test scores for his school.

DISTRIBUTING TEST INFORMATION AT PARENT CONFERENCES - Tom Lord asked about the availability of Stanford test results for staff meetings, but after Mr. Kullman's discussion said that it was questionable. All Attendance Areas are to notify their respective schools of the situation that has arisen.

EIGHTH GRADE GRADUATION REQUIREMENTS - Paul Bonaccorsi has been contacted by high school people, asking if this requirement was still in effect since we have changed to the Stanford testing. Mr. Lile said that the high school principal's voted not to change the Board Policy after the legislature rescinded the State law. It was agreed that the C.T.B.S. could still be given, but that the schools must assume the expense of tests, answer sheets and scoring, if given.

GRADE TWELVE STATE TESTING - JANUARY 1975 - Mr. Lile informed the group that twelfth grade state testing information will be coming out in the FEEDBACK soon and copies will be made available to all high school principals. Areas to be covered on this test are: reading, written expression, math and spelling. There will be 18 different forms (500 items) of the test so that every student will not be taking the same form. The name of the test "Survey of Basic Skills" is four pages long and answers will be written in the booklet, not on a separate answer sheet. The Pupil Information Section must be filled out, just as in grades 1, 2 and 3 state testing.

GRADES TO BE TESTED 1975-76 - Mr. Lile informed the committee that our budget will undoubtedly be $22,594.00 again next year and that we should decide our priorities on grades to be tested and information that they want to receive back on same. The committee asked for the cost per student that would be allowed and the cost of booklets and/or answer sheets, and scoring service costs. (This information was sent to all Committee Members on November 19, 1974). Attendance Area Chairman will discuss this at their meetings and hopefully will have some 'feedback' for the December 17 meeting.

NEXT MEETING WILL BE HELD ON DECEMBER 17, 1974 IN THE STAGE CONFERENCE ROOM AT 9:00 A.M..

FREMONT UNIFIED SCHOOL DISTRICT

DISTRICT-WIDE TEST COMMITTEE

MINUTES

The District-Wide Test Committe met on January 21, 1975. Those in attendance were:

Paul Bonaccorsi
Loren Coburn
Phil Holmes
Tom Lord
Roy Piper
Kurt Lile
Gary Morse
Vance Nelson

KINDERGARTEN AND FIRST GRADE TESTING (1975-76 SCHOOL YEAR) - Roy Piper told the Committee that several principals had asked him about testing at the kindergarten level and wanted to know if we had any new recommendations on testing at this level. Perhaps another committee of kindergarten teachers should be formed to select a test at this level. Mr. Lile told the Committee that after a sub-committee had studied different kindergarten tests and could not decide upon a test, the Committee then, with the permission of Santa Clara, had the Santa Clara Inventory Test printed and distributed one to each kindergarten teacher in the District. This Inventory was to be given at building level at the discretion of each principal. If the principal wants to give a kindergarten test, it had to be paid for from the school budget. Roy paid for the first grade pilot testing out of his budget, but can not do it again so if kindergarten and first grade testing is to be done, we will have to look over our budget and see where we can cut out other grades to do this.

PRIORITIES IN TESTING (1975-76 SCHOOL YEAR) - Mr. Lile stated that Mr. Brazil told him that we must purchase the Magnetic Tape on all our testing from the District Test Budget. This is in the Master Agreement - "Will provide test scores on the student master rosters."

Gary Morse made a motion " Any grade level tested District-Wide will be provided with an Item Analysis". Motion seconded by Phil Holmes. Motion carried - 6 Ayes, 1 No.

Paul Bonaccorsi made a motion "Each school will identify which Item Analysis it will use." Motion seconded by Phil Holmes. Motion amended by Paul Bonaccorsi and seconded by Loren Coburn - "and are responsible for additional costs beyond 16¢ per student". Motion and amendment carried unanimously. Vance Nelson made a motion "Schools not requesting Item Analysis will not be provided this service." Seconded by Loren Coburn. Motion carried.

Secondary principals have made a recommendation that grades 9 through 12 be tested the 1975-76 school year. The Junior High principals also made a recommendation that the 7th and 8th graders be tested the 1975-76 school year.

Phil Holmes made a motion "That grade two be placed at the bottom of the priority list, at this point, for financial reasons". Seconded by Roy Piper. Motion carried (2 abstained; 1 No; 3 Ayes). Mr. Lile asked the Attendance Area Chairmen to discuss and prioritize grades to be tested at their Attendance Area meetings, return with their recommendations at the next Test Committee meeting on February 18, 1975, keeping in mind that our test budget is $22,594.00. (Scoring Service Costing packets were given to each Test Committee member for this purpose).

FREMONT UNIFIED SCHOOL DISTRICT

DISTRICT-WIDE TEST COMMITTEE

MINUTES

The District-Wide Test Committee met on February 18, 1975 and those in attendance were:

Phil Brazil
Phil Holmes
Bob Lewis
Vance Nelson
John Peacock
Roy Piper
Jim Stuart
Kurt Lile
Loren Coburn

1. CORRECTION OF MINUTES - The minutes of the January 21, 1975 meeting were corrected to include Vance Nelson and Gary Morse who were in attendance but inadvertenly left off.

2. PRIORITIES FOR TESTING 1975-76 SCHOOL YEAR - Mr. Lile informed the committee that we were $11,000 short in the testing budget, so can not test all grades as we did this present school year. We have requested additional monies, but whether we get it or not is unknown at this time. Priorities have to be set up on grades to be tested with the monies that we have in the budget at the present time. The Elementary Principals have ranked their priorities: Grades 2, 3, 4, 6 and 5, but recommended that the testing budget be increased so that all grades could be tested.

   Mr. Brazil cautioned the Committee that monies may not be available to test grades 2 through 12 next school year, however, recommended that we request needed funds to do so, but be ready with an alternate proposal in case our request is reduced. He further recommended that the Test Committee prioritize grades to be tested so if monies are insufficient to test all grades the testing office will have needed direction to order tests and scoring services after the final budget is adopted in August.

   Vance Nelson made a motion that grades 2 through 12 be tested and budgeted for in 1975-76. Seconded by Phil Holmes. Motion carried. Jim Stuart made a motion - If testing budget isn't funded with the additional monies for 1975-76, that we test three grades at the elementary level; one grade at the junior high level and two grades at the high school level. Motion seconded by Loren Coburn. Motion carried.

   The Testing Committee agreed the following schedule will be used in selecting grades to be tested, based on the money allocated by the Board of Education:

   a.) 1 Elementary
   b.) 1 Elementary and 1 High School
   c.) 2 Elementary and 1 High School
   d.) 2 Elementary, 1 High School and 1 Junior High
   e.) 2 Elementary, 2 High School and 1 Junior High
   f.) 3 Elementary, 2 High School and 1 Junior High
   g.) 4 Elementary, 2 High School and 1 Junior High
   h.) 4 Elementary, 3 High School and 1 Junior High
   i.) 4 Elementary, 3 High School and 2 Junior High
   j.) 5 Elementary, 3 High School and 2 Junior High

THERE WILL BE NO TEST COMMITTEE MEETING IN MARCH.